Australian Sustainable Finance Taxonomy V0.1

Public Consultation Paper

Second Consultation | October 2024

Australian Sustainable Finance Institute

Acknowledgement of Country and Thanks

The Australian Sustainable Finance Institute acknowledges the Traditional Custodians of Country throughout Australia and recognises their continuing connection to land, waters, species and culture. We acknowledge their ongoing status as the First Peoples of Australia and pay our respects to their Ancestors and Elders past and present.

ASFI values the perspectives, knowledge and experience provided to the development of the Australian sustainable finance taxonomy by First Nations people and thanks those who have and will continue to contribute to its development.

About the Australian Sustainable Finance Institute

The Australian Sustainable Finance Institute's (ASFI) mission is to align the Australian financial system with a sustainable, resilient and inclusive Australia. ASFI's establishment followed an unprecedented collaborative effort by 140 representatives from across the Australian finance sector, civil society, academia, financial regulators and Government to create the Australian Sustainable Finance Roadmap.

Released in November 2020, the Roadmap sets out 37 recommendations to realign the Australian financial system by 2030, to support a more resilient, sustainable and prosperous future for all Australians.

ASFI was established in July 2021 to coordinate and drive Roadmap implementation, working collaboratively across the financial sector, government, regulators, civil society and academia. Our members are Australian banks, asset owners, asset managers, insurers and financial services companies who are committed to ASFI's vision and willing to contribute to sustainable and impactful solutions.

Australian Sustainable Finance Institute

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ASFI sincerely thanks the individual members of the Taxonomy Technical Expert Group for their invaluable feedback, guidance, and endorsement of all taxonomy products. We also greatly appreciate the insights and contributions of all Taxonomy Advisory Group members.

We extend our gratitude to the many organisations and individuals involved in developing the Australian sustainable finance taxonomy, including our technical partners: Climate Bonds Initiative, Flux Consultants, Ambire Global, Climateworks Centre, First Nations Affairs, and Pillar Two. Special thanks to Tim Graham from Climateworks Centre and Mark Fellows from Skarn Associates for providing key data inputs and analysis to inform the technical criteria, and Megan Lawson from ERM for her support in reviewing the draft generic Do No Significant Harm criteria.

Finally, we acknowledge the organisations and individuals who have engaged with us over the past 16 months through various taxonomy forums; subject and industry-specific workshops; and public consultation. Your collaborative efforts have been essential in ensuring the Australian taxonomy is fit for purpose and can achieve its objective of facilitating the flow of capital towards a net-zero emissions future.

Thank you for your commitment and support.

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Australian Energy Council
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Asia Pacific Loan Market Association
Business Council of Australia
Chamber of Minerals and Energy of Western Australia
Clean Energy Council
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Scope and approach of this consultation

The taxonomy criteria set out in this paper have been endorsed by the Taxonomy Technical Expert Group (TTEG) as a draft for public consultation.

Through public consultation, ASFI is seeking:

- diverse and informed technical feedback to optimise the taxonomy's design in accordance with the core taxonomy principles: credibility, usability, interoperability and prioritisation for impact;
- to ensure all stakeholders with an interest in the Australian taxonomy's development have the opportunity to provide input on matters of interest to them; and
- to socialise the taxonomy with various stakeholder groups and foster a greater understanding of its functions.

ASFI understands that the development of an Australian taxonomy cannot be done well without First Nations perspectives, and we particularly encourage First Nations people to provide feedback through this public consultation process.

This is the second of two rounds of public consultation on the Australian taxonomy's initial development, which will conclude in December 2024. ASFI is seeking feedback through this round of public consultation on the following:

- the substantive performance criteria for climate change mitigation for the six priority sectors covered in this initial development phase,
- the Do No Significant Harm framework (DNSH), and
- Minimum Social Safeguards (MSS).

Elements in scope – second public consultation

DESCRIPTION	SECTOR SCOPE
Technical screening criteria for climate mitigation Technical screening criteria (TSC) are applied to each activity covered in the taxonomy and refer to the requirements that must be met for an activity to be assessed as making a substantial contribution to climate change mitigation. The Australian taxonomy includes green and transition classifications – the methodology to determine classification is detailed in **Section 2**.	**Agriculture and Land** ⟫ **Minerals, Mining and Metals** ⟫ **Manufacturing and Industry** ⟫ **Electricity Generation and Supply** ⟫ **Construction and Buildings** ⟫ **Transport** ⟫
Do No Significant Harm (DNSH)	
The DNSH criteria aim to ensure activities that meet the performance thresholds set out in the TSC for climate change mitigation do not cause significant harm to the taxonomy's other environmental objectives. ⟫	
Minimum Social Safeguards (MSS)	
The MSS criteria aim to ensure that an entity engaging in taxonomy-aligned activities adheres to key social protections and standards. ⟫	

How to engage with this consultation process

The public consultation process will run from **9:00am Wednesday 30 October 2024** until **9:00pm Sunday 1 December 2024 (AEDT).** We will not be able to incorporate feedback received after this time.

ASFI welcomes feedback from all stakeholders. Feedback that directly addresses consultation questions will be prioritised. To provide feedback, please respond to the survey available here. Please note that only written responses to the survey will be considered. ASFI is not able to accept written feedback via other mediums, such as email. Unless you request otherwise, your feedback will be published on ASFI's website.

Feedback received during this round of public consultation will be used to inform the final version of the initial Australian taxonomy, which will be delivered to the Australian Government by the end of 2024.

We thank you in advance for participating in the development of the Australian sustainable finance taxonomy.

1. Background and Purpose

About the Australian Sustainable Finance Taxonomy

The Australian Taxonomy Project commenced in July 2023. It is a joint industry-government initiative, led by ASFI in partnership with the Australian Commonwealth Department of the Treasury, to develop an Australian sustainable finance taxonomy.

Funding and partnership from the Australian Government reflects shared appetite across government, finance, and industry for new frameworks to support sustainable finance markets in Australia, and the taxonomy constitutes a key part of Treasury's sustainable finance agenda.

The taxonomy's initial development phase, which will conclude in December 2024, covers:

- the development of climate change mitigation criteria for six priority sectors
- the development of a Do No Significant Harm (DNSH) framework and Minimum Social Safeguards (MSS).

TAXONOMY PROJECT GOVERNANCE

The Australian Council of Financial Regulators' Climate Working Group (CWG), comprising representatives from Treasury, the Reserve Bank of Australia, the Australian Prudential Regulation Authority, and the Australian Securities and Investments Commission, provides governance oversight for the taxonomy's initial development.

The Taxonomy Technical Expert Group (TTEG), whose membership was endorsed by the CWG, provides strategic direction over, input into, and endorsement of all Australian taxonomy products prior to public consultation. The TTEG will provide final endorsement of the taxonomy product delivered to the Australian Government at the end of 2024.

Sector- and subject-specific Taxonomy Advisory Groups provide technical input and feedback on draft taxonomy outputs, including activity selection; the application of the transition methodology to activities; and the proposed criteria prior to endorsement by the TTEG. More information on the taxonomy project's governance arrangements can be found here.

Purpose of an Australian Taxonomy

A sustainable finance taxonomy is a framework to classify economic activities—generally constituted as assets, projects, facilities or measures—that positively contribute to key environmental sustainability objectives.

The Australian taxonomy will provide a common standard for green and transition finance in Australia, helping to accelerate the allocation of capital towards sustainable activities to achieve Australia's net zero ambitions.

The taxonomy will:

- make it easier for financial institutions to identify investment and lending opportunities;
- provide financial and non-financial corporate entities with greater confidence in and assurance over sustainability claims;
- support the provision of consistent and comparable information to users;
- enable comparability between investment products and portfolios; and
- reduce transaction costs associated with due diligence by providing market clarity on whether a transaction is contributing to Australia's climate mitigation goals, thereby increasing the attractiveness of transactions for sustainable activities.

Australian taxonomy environmental objectives

The Australian sustainable finance taxonomy covers the six environmental objectives listed in Table 1. They have been selected and defined based on Australia's environmental priorities and commitments and alignment with other taxonomies.

TABLE 1
Australian sustainable finance taxonomy environmental objectives

Climate change mitigation
Achieve net zero greenhouse gas emissions (GHG) in Australia by no later than 2050 to contribute to the Paris Agreement goal of keeping global temperature increases well below 2°C and seeking to limit temperature increases to 1.5°C based on credible, science-aligned scenarios. To support the achievement of this ambition, rapid and sustained GHG emissions reductions consistent with Paris-aligned, quantitative interim targets informed by the best available science and based on Australia's remaining carbon budget are required to avoid further accumulation of greenhouse gases in the atmosphere and reduce adverse climate impacts. This includes the ongoing transformation of the energy sector to net zero emissions sources.
Climate change adaptation and resilience
Businesses, civil society, communities, landscapes and ecosystems in Australia have the capacity to resist, absorb, adapt to, and transform and recover from the current and projected impacts of climate change, both direct and indirect, in a timely and effective manner by 2050. To support the achievement of this ambition, immediate actions and investments are required that anticipate, prepare for, and respond to climate-related risks to reduce the costs and impacts associated with response and recovery.
Biodiversity and ecosystem protection
Australia's biodiversity loss is halted and reversed and all ecosystems are conserved, restored and sustainably used by 2050 in line with the goals and targets of the Kunming-Montreal Global Biodiversity Framework. The impacts of climate change, invasive species and human pressures are minimised to enable a continued flow of ecosystem services within the limits of planetary boundaries and based on the principle of equitable outcomes for diverse societal needs. Elevating and integrating First Nations-led traditional practices is critical to the achievement of this ambition. Adverse environmental impacts are avoided or minimised while efforts to protect, conserve and restore the environment are scaled up. By 2030, at least 30 per cent of Australia's areas of degraded terrestrial, inland water, and marine and coastal areas are under effective restoration; and at least 30 per cent of terrestrial and inland water, marine and coastal areas, especially areas of particular importance for biodiversity and its ecosystem functions and services, are effectively conserved and managed. Human-induced extinction is halted and extinction risk is minimised to maintain and restore genetic diversity within and between species; and agriculture, aquaculture, fisheries and forestry are managed sustainably.
Sustainable use and protection of water resources
Aquatic ecosystems are conserved and restored at a catchment level by 2050 in Australia in line with the goals and targets of the Kunming-Montreal Global Biodiversity Framework to enhance their ecological integrity and connectivity, genetic diversity and enable a continued flow of ecosystem services within the limits of planetary boundaries and based on the principle of equitable outcomes for diverse societal needs. Elevating and integrating First Nations-led traditional practices is critical to the achievement of this ambition. Freshwater withdrawals from surface water bodies and groundwater are effectively managed so that deterioration in water quality and the biodiversity of aquatic ecosystems is halted. By 2030, at least 30 per cent of areas of degraded inland water, marine and coastal ecosystems are restored; and at least 30 per cent of inland, marine and coastal areas are effectively conserved and managed.
Pollution prevention and control
Pollution risks and the adverse impacts of pollution from all sources are eliminated where possible or reduced to levels that are not harmful to people, biodiversity or ecosystem functions and services in Australia by 2030. To support the achievement of this ambition, pollution sources, sinks and pathways are identified and risk-based measures are applied to avoid, reduce and safely remediate pollution from identified contamination sources, including air toxins, international convention chemicals such as Persistent Organic Pollutants, and other chemicals and minerals of concern. The risks associated with hazardous waste are effectively managed and circular economy-aligned approaches are identified and implemented to prevent, minimise, recycle and eliminate other categories of waste.
Circular economy
Achieve sustainable design, production and consumption in Australia by transitioning from the current linear "take-make-waste" economic system to a more circular economy by 2030 that supports resource use within planetary boundaries. To support the achievement of this ambition, increase Australia's circularity rate by focusing on designing out waste and pollution; shift to renewable and long-lived materials; implement more materials-efficient production processes and circular business models; circulate materials and products as long as possible (at their highest value); and regenerate nature.

Prioritising the climate change mitigation objective

The Australian taxonomy is prioritising the development of performance criteria for climate change mitigation in its initial development phase. This reflects the urgent market need for credible and usable guidance to identify transition activities that are aligned with or make a substantial contribution towards achieving the Paris Agreement temperature goals. It also supports interoperability with international taxonomies and consistency with sustainability-related disclosure frameworks, which have similarly prioritised climate change mitigation to date.

The taxonomy's other environmental objectives inform the scope of the Do No Significant Harm criteria, which are included to ensure that each economic activity covered in the taxonomy does not significantly harm the other environmental objectives throughout its life cycle.

Recognising the importance of broader environmental objectives to Australia's long-term sustainability, the Australian taxonomy has been designed to ensure that coverage can be expanded in the future to include performance criteria for economic activities that make a substantial contribution to, or are aligned with, the other environmental objectives.

HOW WILL THE AUSTRALIAN SUSTAINABLE FINANCE TAXONOMY BE 1.5°C-ALIGNED?

Aligning a taxonomy with a credible 1.5°C pathway that is recognised by global capital markets is important to provide clarity about activities that verifiably contribute to emissions reductions, which can support investors in shifting asset allocations toward transition-related opportunities over time.

Internationally recognised and credible 1.5°C-aligned scenarios are being used to identify (a) the selection of activities prioritised in the taxonomy; and (b) the technical screening criteria for those activities, including emissions intensity thresholds and other performance requirements attached to green and transition classifications.

The core international reference scenario for the taxonomy's development is the International Energy Agency's (IEA, 2023) Net Zero Emissions scenario (NZE2050). While other credible 1.5°C scenarios have been developed, including by the Intergovernmental Panel on Climate Change and the Network for Greening the Financial System, the IEA's NZE2050 model is commonly used as a reference in global capital markets, and aligning with it strengthens the taxonomy's interoperability.

The key Australian reference scenarios include:

- Climateworks Centre's (2023) Australian 1.5°C scenario developed in partnership with CSIRO;
- CSIRO's (2023) 1.5°C Rapid Decarbonisation (CRD) scenario;
- CSIRO's (2024) scenarios for the Climate Change Authority's 2024 Sector Pathways Review, including:
  - *A40/G1.5 – assumptions reflect greater global ambition and more rapid emissions reductions. Under that more ambitious global context, the scenario has Australia achieving net-zero in 2040.*
  - *A50/G2 – assumptions reflect a world tracking to a global warming outcome of less than 2°C. Within that context, the scenario sees Australia achieving net-zero by 2050.*

These models all employ the AusTIMES modelling methodology, which downscales the IEA's TIMES model to the Australian context. Appendix 1 provides a detailed overview of the modelling methodologies used in each.

Sectors and activities have been prioritised based on their current emissions shares, their role in facilitating Australia's transition to net zero, and/or their anticipated demand in an Australian net zero economy.

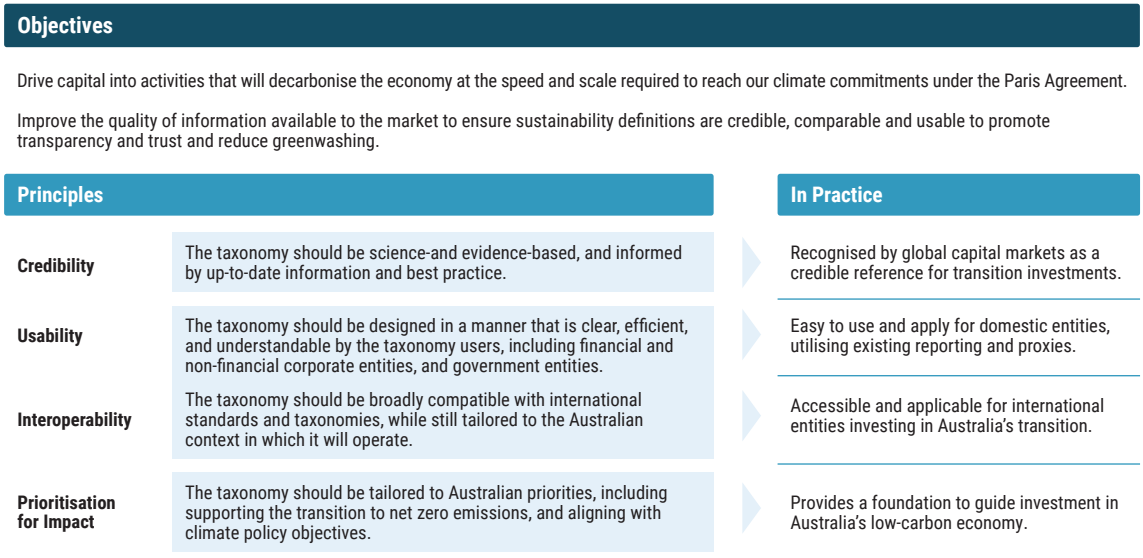
These filters underscore the value of developing an Australian taxonomy to:

- Identify key decarbonisation opportunities in high-emitting sectors in Australia that have not been comprehensively covered in other taxonomies, such as mining and agriculture;
- tailor activities and criteria to incorporate Australian practices, standards and disclosure frameworks; and
- support the implementation of specific priorities articulated through, among other initiatives, the Australian government's six sectoral emissions reduction plans and the Future Made in Australia policy platform.

Figure 1 summarises the objectives and principles guiding the taxonomy as set out in a Terms of Reference between CWG and ASFI, along with the outcomes sought through fulfilment of the taxonomy's core principles.

Due to the Australian taxonomy's initial focus on climate change mitigation, the use of 'transition' in this paper refers to activities that make a direct contribution to reducing emissions, support the development of low-carbon industries, and/or enable the decarbonisation of activities.

FIGURE 1
The Australian taxonomy's objectives, principles and practices



Taxonomy in the Policy Context

Accelerating the deployment of public and private investment toward net zero-aligned activities is essential for Australia's economy to transition in line with the Government's commitments under the Paris Agreement. It is also key to realising the Government's Future Made in Australia vision, which seeks to position Australia as a leading exporter in sectors critical to the global transition.

The Government's Sustainable Finance Roadmap, released in June 2024, sets out a number of policy and regulatory reform priorities that support these aims – see Figure 2. These focus on strengthening market transparency in relation to climate risk and opportunity, improving financial market regulation, and catalysing growth in sustainable finance markets.

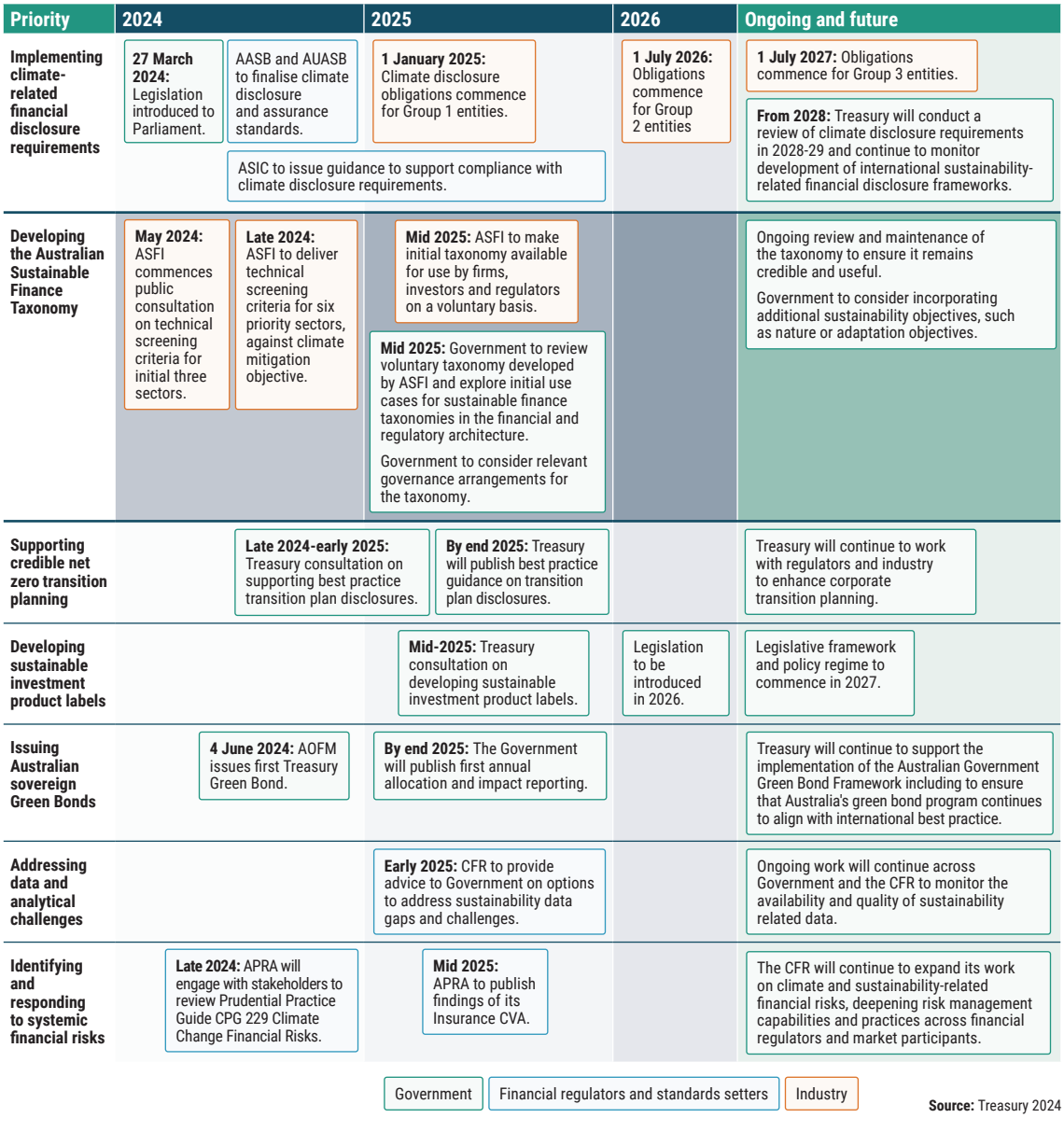
Implementation of several elements of the Government's Roadmap is in train. Australia's inaugural sovereign green bond – worth A$7bn - was issued by the Australian Office of Financial Management (AOFM) in June, while Australia's mandatory disclosure regime will come into effect from 1 January 2025 following the successful passage of legislation in September and issuance of final reporting standards by the Australian Accounting Standards Board in October 2024.

The taxonomy is an important component of the Government's Roadmap. It will enable market participants to understand how certain economic activities and investments align with, or contribute to, climate and sustainability outcomes- thereby providing a robust basis to inform capital allocation decisions to climate-related opportunities and support sustainable finance products.

As per the Roadmap, the initial taxonomy will be available for use on a voluntary basis by both the private and public sectors, with the Government to explore options for long-term governance arrangements and potential regulatory use cases in consultation with key stakeholders. Reflecting strong interest expressed in the public consultation feedback on its Sustainable Finance Strategy, the Government has also said it will consider potential expansion priorities such as adaptation (Commonwealth Treasury, 2024).

FIGURE 2

Proposed Reform Timeline – Australian Government Sustainable Finance Roadmap



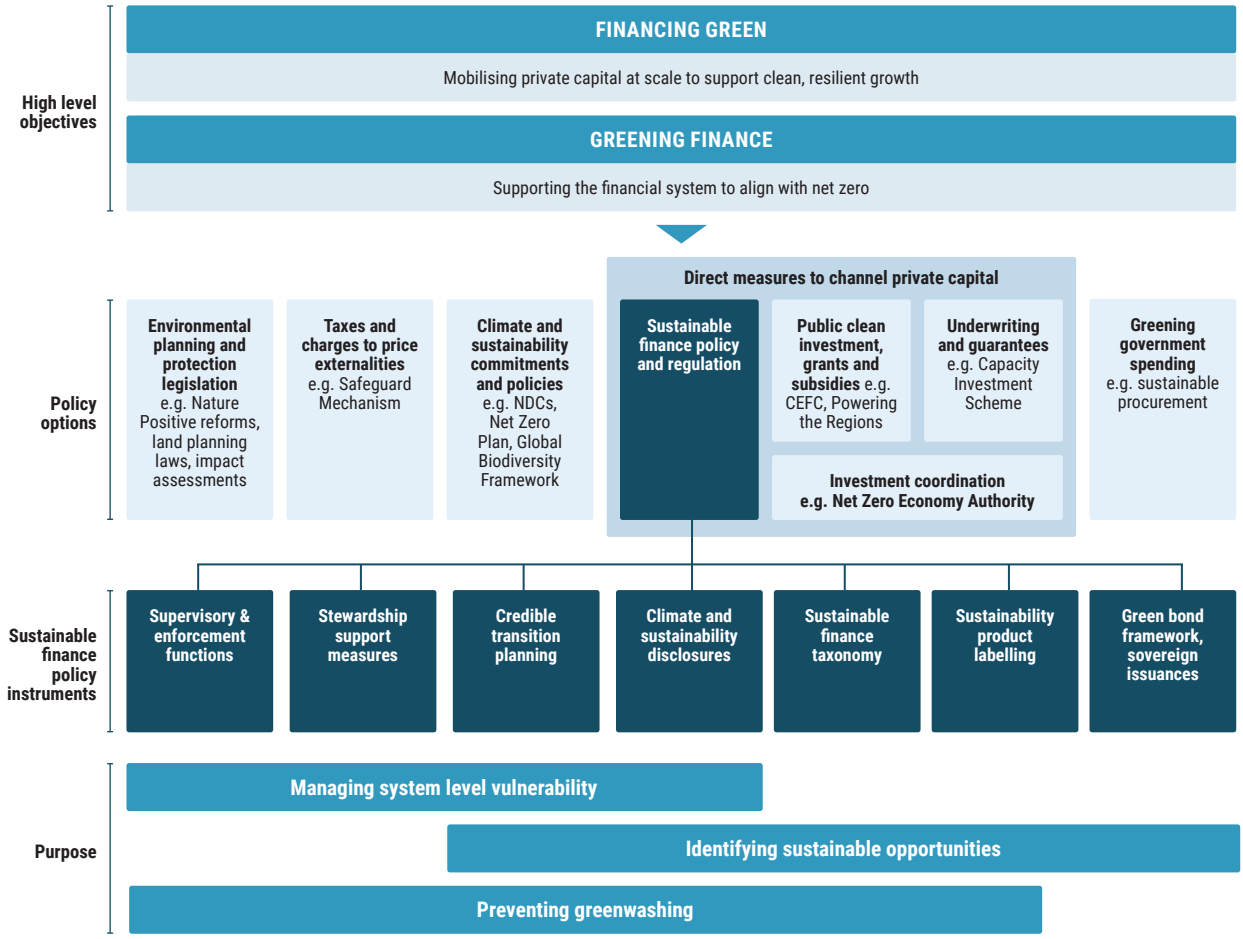
Source: Treasury 2024

In terms of possible voluntary use cases, capital markets globally are increasingly viewing taxonomies as containing useful and credible metrics as part of corporate transitions plans, for example through assessment of forward allocation of taxonomy aligned capital investment. Similarly, taxonomies can be a useful tool for organisations to identify climate-related opportunities – an important aspect of climate-related disclosures – as well as informing sovereign green bond frameworks and green public expenditure.

A credible, interoperable and useable taxonomy is important to help ensure Australia retains access to cost competitive capital required for the transition. It is not, however, the only piece of the puzzle. As set out in Figure 3, sustainable finance policy and regulation (including the taxonomy) is one of several levers for delivering on Australia's net zero objectives.

Other relevant measures include Australia's 2035 Nationally Determined Contribution (NDC), due in 2025, together with sector decarbonisation plans currently under development (note: importantly, the sectors covered in the taxonomy align with those priority sectors for which the Government is developing decarbonisation plans). Public finance, in particular through specialist investment vehicles, combined with policy and regulatory action in other areas (including implementation of the National Energy Performance Strategy, and the Nature Positive Plan) also have important roles to play.

FIGURE 3
Role of sustainable finance policy and regulation in Australia's transition



2. Taxonomy Methodology

Taxonomy development framework

The broad approach to developing a taxonomy framework, illustrated in Figure 4, is as follows:

1. The overarching environmental and social objectives are identified and described (see headline ambitions listed in Table 1 above);
2. The taxonomy's scope and coverage, including sectors and activities, is determined;
3. Climate change mitigation technical screening criteria (performance criteria) for those sectors and activities is developed; and
4. Further qualifying criteria is developed to ensure activities that support climate change mitigation meet minimum social safeguards and do no significant harm to the taxonomy's other environmental objectives.

Additional detail on the taxonomy methodology framework can be found in the first public consultation paper.

Green and transition methodology

The inclusion and classification of an activity in the taxonomy is determined by:

1. whether it has a stable or growing role in a post-net zero economy;
2. the availability of low and zero-emissions alternatives that produce the same output;
3. whether the activity's Scope 1, 2 and 3 emissions can be materially reduced, even if it is only economically feasible in the medium to long term; and
4. its contribution to directly reducing emissions or enabling the growth of zero-emissions technologies.

Figure 5 outlines the transition methodology used to determine activity eligibility and the application of green and transition classifications.

FIGURE 4
Australian taxonomy development framework

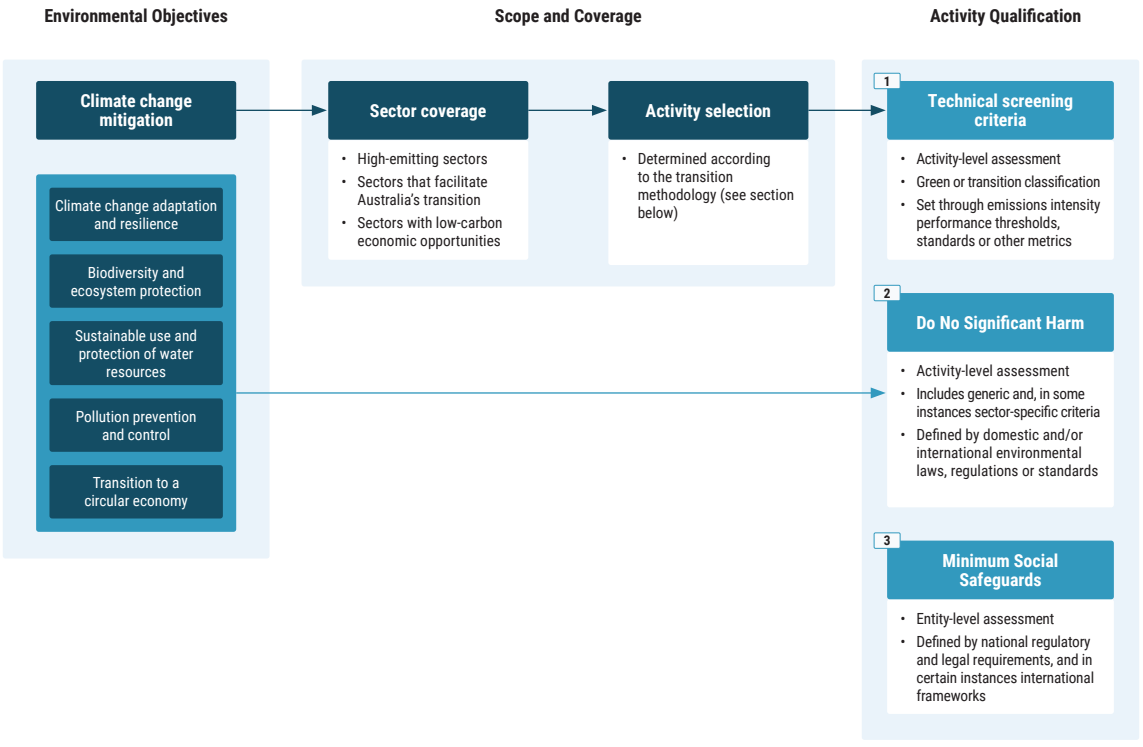
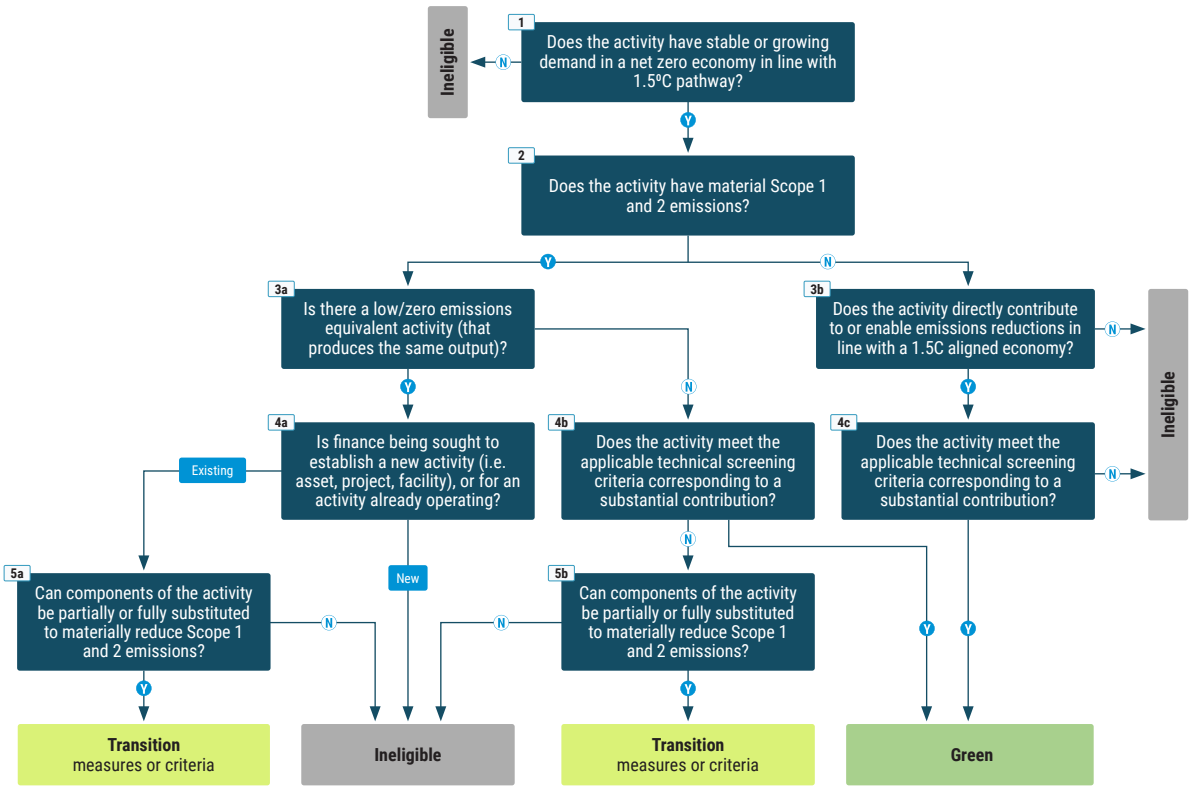


FIGURE 5
Transition methodology – classification of activities



Green classification

The three qualifying paths by which an activity can be classified as green under the Australian taxonomy are summarised in Table 2. Green criteria apply to whole activities, meaning assets, projects or facilities corresponding to an activity descriptor. Wherever possible, activity descriptors are consistent with ANZSIC classifications.

TABLE 2
Types of green classifications

Low or zero emissions substitutes	• Activities that can directly reduce emissions through their substitution for emissions-intensive alternatives can be classified as green. • To obtain green classification, the activity must meet the corresponding performance requirements set out in the technical screening criteria. • If the activity does not meet the criteria, it is not eligible under the taxonomy. This is to ensure that new low-emissions activities include the best performing technologies. • Performance requirements set through technical screening criteria are generally based on emissions intensity thresholds aligned with a 1.5°C pathway. • An example is renewable electricity generation activities, which provide significant emissions reductions relative to fossil-based alternatives. To be considered green, these activities must meet an emissions intensity threshold of 100g CO2e / KWh before 2030, after which the thresholds decline.
High performing activities with no low-emissions alternative	• Activities that do not have a low-emissions alternative that produces the same output may be eligible to be classified as green in the taxonomy. • However, the activity must have a stable or growing demand in a post- net zero economy and meet performance requirements specified in the screening criteria to be classified as green. • Examples of such activities include the manufacture of cement and steel, and air transport. • Performance requirements are generally set through emissions intensity thresholds consistent with a 1.5°C pathway, and may include additional requirements to mitigate the risks of carbon lock-in. • If the activity does not meet the green criteria, transition measures will be available in instances where components of the activity can be partially or fully substituted to materially reduce Scope 1 and 2 emissions.
Enabling activities	• Where an activity directly enables the decarbonisation of another activity, it may be eligible as green under the taxonomy. • Consistent with the International Capital Market Association's (2024) guidance on green enabling projects, green enabling activities should not lead to locking-in high GHG emitting activities relative to other technologically feasible and/or commercially viable solutions. • Examples include the manufacture of zero-emissions technologies (e.g. electrolysers, solar panels), and infrastructure that supports the growth of zero and low-carbon transport (e.g. electric vehicle charging infrastructure) or encourages mode shifting (e.g. bike paths).

Transition classification

By definition, transition refers to movement from one state or condition to another. As the taxonomy is focused on climate change mitigation, transition signifies the decarbonisation of emissions-intensive activities toward a point where their performance is more closely aligned with a 1.5°C pathway.

For this reason, transition criteria generally apply to entities seeking finance to decarbonise components of their economic activities (i.e. assets, projects, facilities) where the activity produces an output with a stable or growing demand profile in a post-net zero economy, and has material Scope 1 and 2 emissions.

Where an activity has a low-emissions alternative, measures are not available for a new activity, as there is an expectation that the whole activity should meet green criteria. For new whole activities without a low or zero-emissions alternative, such as mining, measures can be accessed for new activities.

There are two types of transition criteria, summarised in Table 3.

TABLE 3
Types of transition classifications

Decarbonisation measures	• Decarbonisation measures include eligible technologies, processes, practices, materials and/or services that improve the emissions performance of an activity, bringing it closer to alignment with green performance thresholds. These measures are included where components of the activity can be partially or fully substituted to materially reduce Scope 1 and 2 emissions. They do not make the whole activity green. • The purpose of decarbonisation measures is to ensure there are opportunities for entities to access finance to decarbonise existing long-life activities (i.e. assets and facilities) and move toward 1.5°C aligned performance. • Where whole existing activities do not meet the green criteria, the entity will be eligible to access decarbonisation measures to decarbonise the activity. • Decarbonisation measures can be reported as taxonomy-aligned capital expenditures (CapEx) or operational expenditures (OpEx), but not as revenue. • Most measures are time-bound, meaning they are only eligible until a date specified in the technical screening criteria. This is to reflect the need for activities to move toward alignment with green criteria as assets are replaced. • Additionally, certain measures include a materiality threshold, which stipulates the scale at which a measure must be applied to be considered taxonomy-aligned.
Transition criteria (whole activity)	• In limited cases, transition criteria is included for a whole existing activity where an assessment is made that it can feasibly move toward alignment with the green criteria in the short to medium term. • In these instances, a sunset date on the transition criteria is generally applied, after which the activity must meet the green criteria to remain taxonomy-aligned. • Transition criteria for whole activities includes emissions performance and/or materiality requirements that must be met, whereas transition measures do not. • Transition criteria for whole activities is only currently included in the Construction and Buildings sector.

3. Using the Taxonomy

> *"Once finalised, the initial taxonomy will be available for use on a voluntary basis by both the private and public sectors. The taxonomy will provide an important source of guidance and consistency for firms, investors, and regulators, improving transparency and supporting the development of credible sustainable finance products. The Government will explore options for governance arrangements and potential regulatory use cases in consultation with key stakeholders"* — Commonwealth Treasury (2024).

Taxonomies are commonly used to identify eligible economic activities for use-of-proceeds green-labelled debt. However, they are increasingly being used by financial and non-financial corporate entities, and governments to guide investment and strategic asset allocation, demonstrate the alignment of business activities with transition-related opportunities, and facilitate the flow of standardised information.

Taxonomies are not designed to be used in isolation. They can be used as a key input for multiple purposes, including sustainable financial instruments and products, investment and incentives, disclosures, and transition planning. The range of a taxonomy's applications can be categorised into activity and entity-level uses. Each will be addressed in turn below.

Activity-level uses

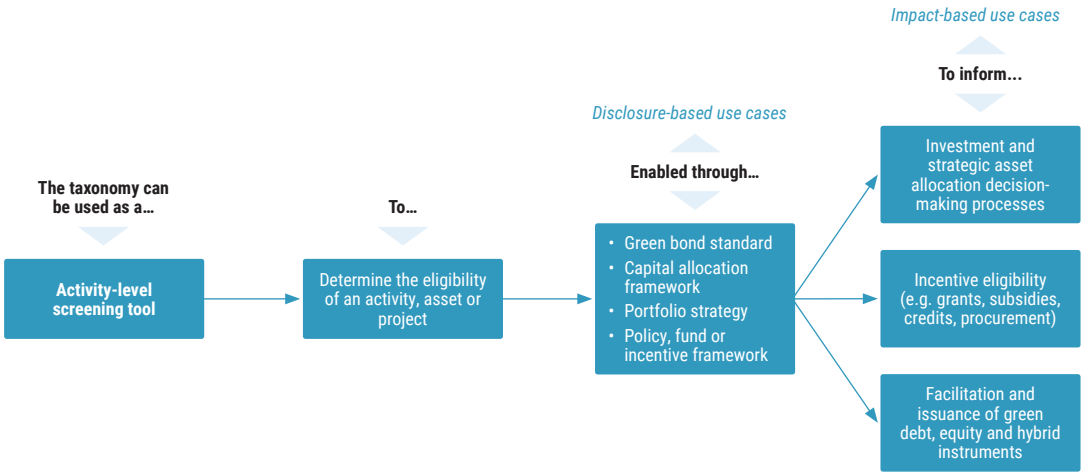
The most common use of a taxonomy is to screen for eligible green investments and expenditures, particularly in the issuance and facilitation of sovereign, sub-sovereign and corporate green use-of-proceeds debt (e.g. green bonds and loans) by both the public and private sector.

A credible taxonomy provides a useful framework to screen for eligible assets, set eligibility criteria, guide the project evaluation and selection process, and frame post-issuance impact reporting. The Australian Green Bond Framework states that opportunities to align elements of the Framework with the Australian taxonomy's screening criteria will be considered as the taxonomy develops (Australian Office of Financial Management, 2023).

A taxonomy's value as an activity-level tool extends to other uses, including as an input to inform entities' investment, as a tool to assess the performance of an existing asset relative to climate change mitigation, as a basis for strategic asset allocation decisions, and as an eligibility indicator for the deployment of public finance for climate initiatives.

These uses are enabled through the taxonomy's adoption in frameworks and strategies that set the parameters for capital allocation decisions.

FIGURE 6
Illustrative examples of activity-level taxonomy use cases



Entity-level uses

Taxonomies are increasingly recognised as a tool, among others, that can be used by entities to demonstrate the alignment of their business activities and investment with transition-related opportunities in a credible way that is useful to capital markets.

The key metrics used by entities to demonstrate alignment include:

- Percentage taxonomy-aligned revenues – the percentage of an entity's total net revenue derived from products or services that are taxonomy-aligned;
- Percentage-aligned capital expenditures (CapEx) – the percentage of an entity's total CapEx (tangible and intangible assets) allocated toward taxonomy-aligned activities. In the EU, for example, this includes expenditures that are (1) directed to assets and processes associated with taxonomy-aligned activities, (2) part of an investment plan to expand taxonomy-aligned activities or to enable activities to become taxonomy-aligned, and (3) related to the purchase of output from taxonomy-aligned activities.
- Percentage-aligned operational expenditures (OpEx) – the percentage of an entity's total OpEx allocated toward taxonomy-aligned activities, generally referring to non-capitalised expenditures in taxonomy-aligned outputs (e.g. low-carbon liquid fuels), maintenance and servicing, and research and development.

As Figure 7 illustrates, taxonomy-aligned metrics at the entity level could primarily be used in two types of disclosures:

1. Climate-related financial disclosures:

The Metrics and Targets section of the ISSB S2 standard, which has been adopted in the Australian Sustainability Reporting Standard 2 (ASRS 2), includes a requirement for reporting entities to disclose (a) the amount and percentage of assets or business activities aligned with climate-related opportunities; and (b) the amount of capital expenditure, financing or investment deployed towards climate-related risks and opportunities.

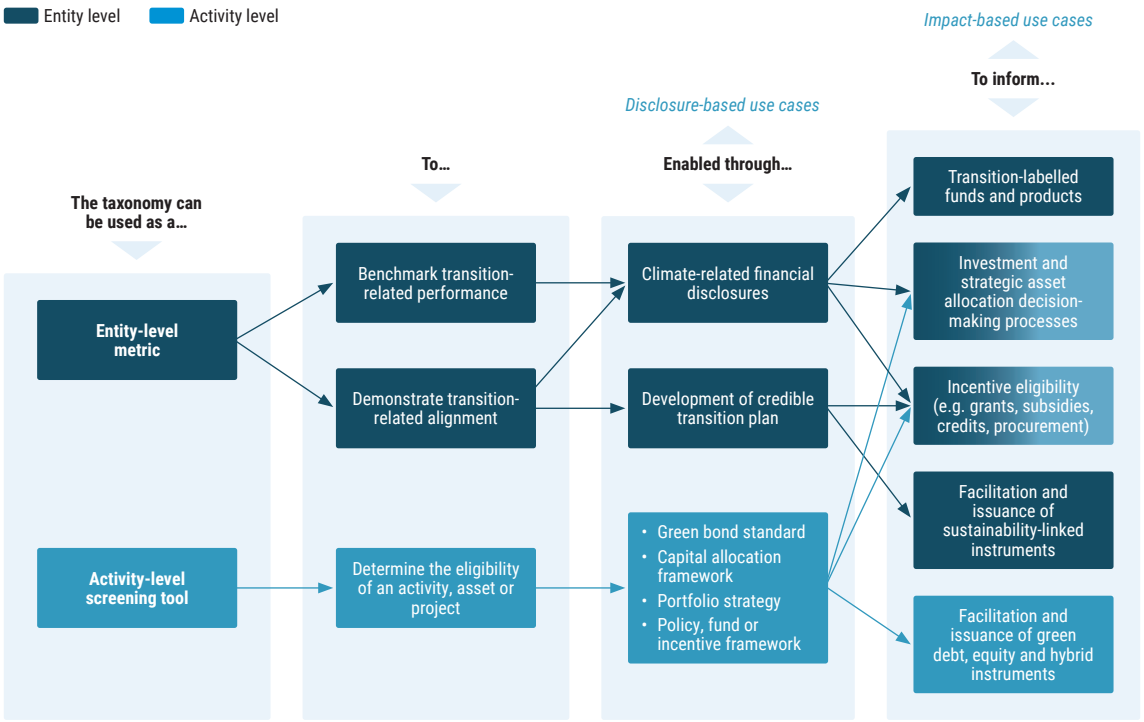
The use of the taxonomy to inform disclosures against these requirements is voluntary and not mandated under ASRS 2. However, taxonomy-alignment can be a valuable way for entities to demonstrate how their business activities and investments are moving toward alignment with transition-related opportunities year-on-year.

2. Transition plans:

While short, medium and long-term emissions reduction targets referencing science-based scenarios are central to transition plans, investment targets that demonstrate how emissions reductions will be realised are critical for the credibility of transition plans and their implementation.

While not mandated in Australia, the disclosure of forward-looking taxonomy-aligned targets, particularly related to CapEx, can be valuable in supporting an entity to communicate credibility, intent and ambition to global investors regarding its plans to capitalise on transition-related opportunities. The use of credible taxonomies to inform investment targets is recognised in several best-practice guidance materials, including by the Glasgow Financial Alliance for Net Zero, Science-based Targets Initiative, and the Transition Plan Taskforce.

FIGURE 7
Illustrative taxonomy use cases – activity and entity-level



The application of taxonomy-aligned metrics in these ways can contribute to the flow of more consistent and comparable information in sustainable finance markets, providing two key benefits for investors:

1. **Visibility over an entity's alignment with transition-related opportunities over time:** among other purposes, transition plans and climate-related financial disclosures are valuable mediums for an entity to inform investors and shareholders about how they are strategically responding to climate-related risks and opportunities, and their performance against their transition objectives over time (Network for Greening the Financial System, 2023). The adoption of taxonomy-aligned metrics enables a consistent reference for investors to be able to assess an entity's plan to align investment and/or business activities with transition-related opportunities, and its year-on-year performance towards that alignment. Furthermore, as recognised by the International Capital Markets Association, forward-looking taxonomy-aligned metrics derived from a credible taxonomy can be used as a sustainability performance target to underpin sustainability-linked debt instruments.
2. **A point of comparability to benchmark entities' transition-related alignment**: improvements in the flow of standardised information in sustainable finance markets can enable institutional investors and banks to better compare the performance or exposure of entities relative to transition-related opportunities. This can be valuable to (a) inform decision-making processes related to the allocation of capital, including direct and portfolio investment selection for funds and products, and (b) support institutional investors to disclose information about the transition-related weighting of assets, funds or products. It is anticipated that the use of taxonomy-aligned metrics for this purpose is a longer-term objective as it depends on the broad adoption of such disclosures by entities.

OPERATIONALISING THE TAXONOMY

The Australian Government, with advice from Commonwealth Treasury and the Council of Financial Regulators, will determine the long-term institutional arrangements of the Australian sustainable finance taxonomy.

The Sustainable Finance Roadmap confirms that the Government will explore options for governance arrangements and potential regulatory use cases in 2025 in consultation with key stakeholders.

The Government will also consider next steps for the taxonomy's development including potential opportunities to expand coverage.

4. Demonstrating Taxonomy Alignment

Green and Transition Classifications

Activity level

Green and transition classifications differentiate activities that are aligned with a 1.5°C pathway, and activities and measures that can facilitate movement toward alignment, respectively.

Accordingly, for the purpose of labelling debt, expenditures, investments and loans directed toward green activities and transition activities or decarbonisation measures can be labelled as taxonomy-aligned, subject to meeting DNSH and MSS requirements (guidance forthcoming).

However, there are some proposed distinctions in the requirements attached to the issuance of use-of-proceeds debt corresponding to transition classification in the Australian taxonomy, including:

1. Where transition criteria include a sunset date, use-of-proceeds debt is only eligible for transition measures or activities until that date.
2. Use-of-proceeds debt aligned with transition criteria or measures that has a tenor beyond the sunset date must disburse all funds before the sunset date or fall out of compliance.

Entity level

If entities use taxonomy-aligned metrics to demonstrate transition-related performance or targets (i.e. through percentage taxonomy-aligned CapEx, OpEx and/or revenue) green and transition classifications apply differently in two instances:

- transition measures cannot be classified as taxonomy-aligned revenue.
- for transition activities and measures, taxonomy aligned CapEx, OpEx and revenue can not be claimed after the sunset date (see Table 4).

APPLYING EMISSIONS INTENSITY THRESHOLDS TO GREEN DEBT ISSUANCES

Where data are available and applicable to the activity, the Australian taxonomy defines performance level requirements for green activities through emissions intensity thresholds aligned with 1.5°C-aligned pathways. These thresholds generally decline over five or ten-year increments.

For use-of-proceeds debt issuances that align eligibility with emissions intensity thresholds applied in the green criteria, it is recommended that the emissions intensity value corresponding to the midpoint of the tenor of the debt is used to determine eligibility.

Use-of-proceeds debt with a tenor of ten years or less will be grandfathered so that even if thresholds are revised in a future iteration of the taxonomy, the debt can still be deemed as green-labelled.

TABLE 4

Taxonomy-alignment at the entity level – green and transition criteria

	Percentage taxonomy-aligned		
	CapEx	**OpEx**	**Revenue**
Green	✓	✓	✓
	Revenue derived from existing business activities that meet the green criteria can be classified as taxonomy-aligned. This is a year-on-year assessment, and activities must continue to meet declining thresholds over time to retain alignment.		
	CapEx and OpEx toward activities that meet green performance criteria can be claimed as taxonomy-aligned.		
Decarbonisation measures	✓	✓	✗
	Investments and expenditures in decarbonisation measures can be claimed as taxonomy-aligned CapEx and/or OpEx.		
	As measures do not cover a whole business activity, taxonomy-aligned revenue cannot be claimed.		
Transition criteria	✓	✓	✓
	Revenue derived from existing business activities that meet the transition criteria can be classified as taxonomy-aligned. This is a year-on-year assessment, and activities must continue to meet declining thresholds over time to retain alignment.		
	Entities cannot claim taxonomy-aligned CapEx, OpEx and/or revenue after the sunset date for transition criteria, and must meet green criteria to retain alignment.		

FOR CONSULTATION

1. As a voluntary tool, do you think further guidance is required to clarify how the taxonomy can be used under existing and emerging regulations? If so, what taxonomy uses do you consider to be a priority to enhance the taxonomy's voluntary adoption?

2. Should the taxonomy provide guidance to lenders and users on the approach and expectation for evidencing alignment with the DNSH and MSS criteria? If so please provide suggestions on what guidance is needed?

5. For Consultation: Agriculture and Land

A. Sector Context

Globally, the agriculture and land sector, often referred to as the Agriculture, Forestry, and Other Land Use (AFOLU) sector, significantly contributes to greenhouse gas (GHG) emissions, but also offers considerable opportunities for carbon sequestration. The agriculture and land sector, on average, accounted for 13-22 percent of total anthropogenic emissions worldwide in the period 2010–2019.

By 2050, food production is predicted to need to increase by 49 percent from 2013 production volumes to meet the demands of a growing global population (FAO, 2018). This creates a dual challenge for the agricultural sector: the need to increase food and fibre production while simultaneously reducing its climate impact. The sector's complexity, shaped by its interaction with natural environments, diverse management practices, and significant regional variations, adds to the difficulty of implementing consistent and effective mitigation strategies.

Similarly, the outlook for a primary processed wood products consumption of 3.1 billion m^3 roundwood equivalents (RWE) in 2050 reflects an increase of 37 percent compared to 2020 (FAO, 2022).

Science-based climate projections consistent with limiting global warming to 1.5ºC consider a halting of land clearing of high-carbon ecosystems for agricultural production and a significant increase in restoration of degraded land, reforestation and carbon sequestration in land.

Australia

Australian agriculture contributes significantly to both domestic food production and global exports and accounts for 55 percent of Australian land use (426 million hectares, excluding timber production, as of December 2023 (ABARES, 2024). Agriculture in Australia is predominantly managed on large parcels of land that have long management cycles and often coexist with native ecosystems.

In 2021-2022, the agriculture and land sector emissions accounted for 17.9 percent of the country's net national emissions, 14.9 percent when excluding Land Use, Land-Use Change, and Forestry (LULUCF) (DCCEEW, 2022). As the electricity generation sector rapidly decarbonises along with other sectors, agriculture's share of Australia's national emissions is expected to rise.

Agricultural emissions predominantly consist of methane (CH4) and nitrous oxide (N2O), as seen in Figure 8, whereas emissions from Forestry and Other Land Use (FOLU) are primarily carbon dioxide (CO2).

The largest sources of emissions in agriculture are associated with livestock production, specifically from enteric fermentation and manure management followed by fertiliser use.

Agricultural emissions have remained stable over time, while emissions from LULUCF have declined due to changes in vegetation management, as seen in Figure 9. Land use changes related to pasture and crop expansion are reported under LULUCF in Australia.

FIGURE 8
Share of Australian agricultural emissions (excluding LULUCF) by gas 2021-22 (DCCEEW, 2022)

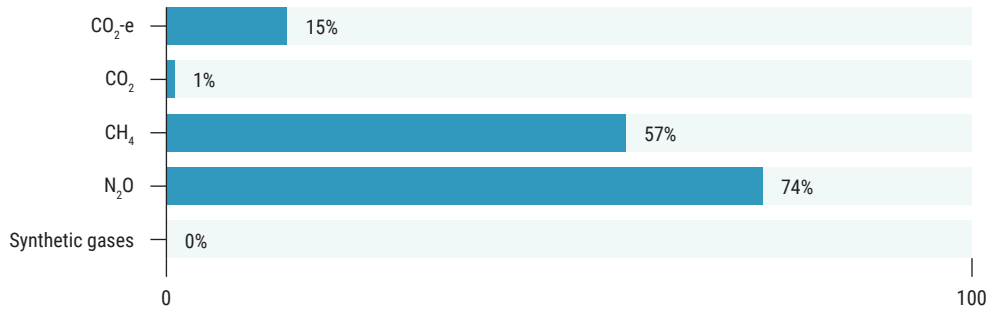
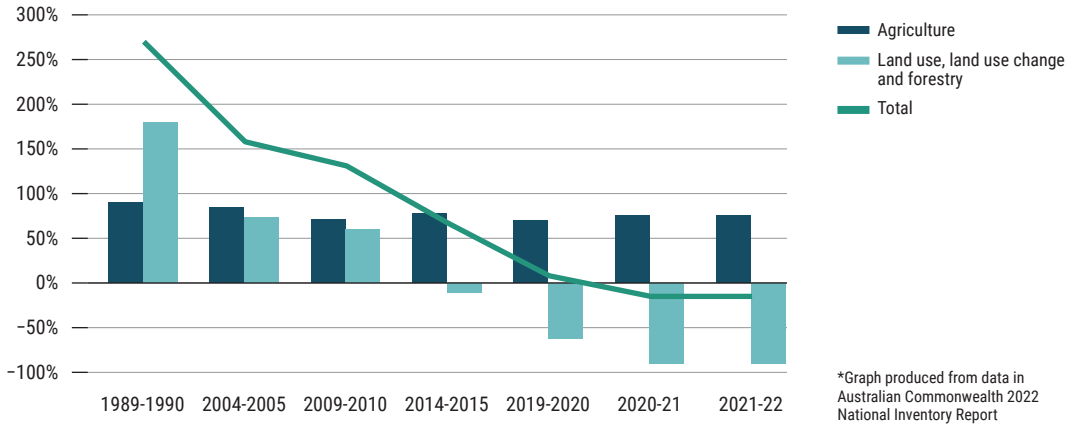


FIGURE 9

Net greenhouse gas emissions from Agriculture and LULUCF (DCCEEW, 2022)



Australia's agricultural and land sector is already feeling the impacts of climate change, including more frequent extreme weather events and shifting seasonal patterns, which threaten productivity, performance, and landscape health.

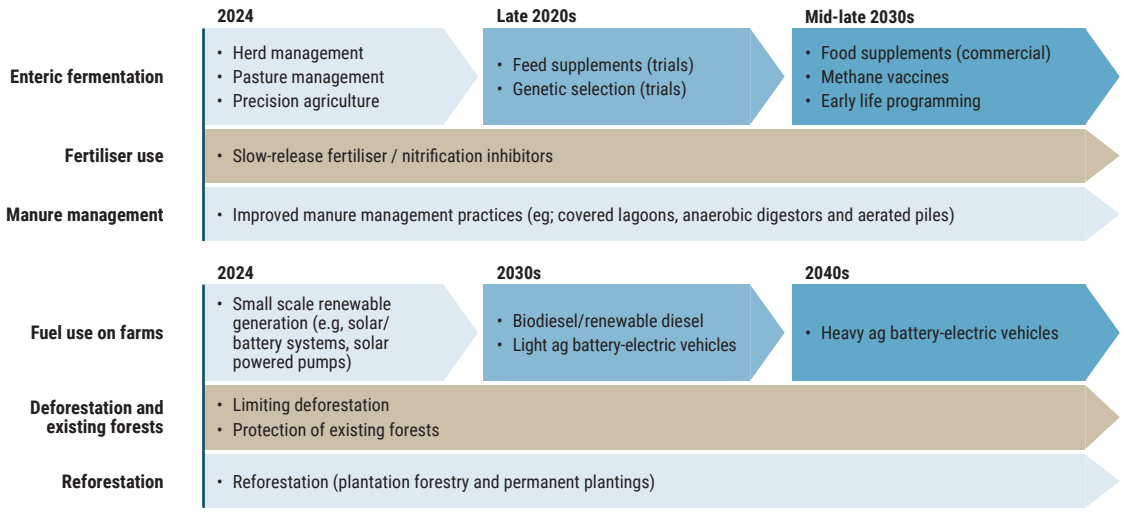
Managed and natural ecosystems are also significantly affected by climate change, exacerbating existing environmental pressures and threatening ecosystem health.

The Australian Climate Change Authority's Sector Pathways Review highlighted agriculture is well placed to contribute to carbon removals and identified prospective decarbonisation pathways for key activities (Climate Change Authority, 2024a). Figure 10 represents the identified priority decarbonisation pathways for the agriculture and land sector based on key technologies and land management practices identified.

The Australian Government is also developing a sectoral emissions reduction plan for the agriculture and land sector to support the Australian Government's Net Zero Plan (also in development). The sectoral plan will explore ways the sector can contribute to economy-wide goals to reduce emissions.

FIGURE 10

Pathways for decarbonisation for Australian Agriculture (CCA, 2024)



B. Methodology

Overview

The agriculture and land sector presents significant challenges when compared to other sectors, including:

- Complexity of emissions sources: the sector encompasses a wide range of emission sources and sinks, including agriculture, forestry, and land use changes.
- Lack of climate scenarios: compared to other sectors, climate scenarios are limited and the underlying assumptions for scenarios are evolving.
- Natural and anthropogenic processes: sector emissions result from both natural and human-induced processes that occur simultaneously and are difficult to disentangle.
- Inclusion of sinks: it is the only major sector that currently provides established anthropogenic sinks (carbon sequestration in land and biomass).
- Methodological differences: Various approaches and data sources are used to estimate agriculture and land sector emissions nationally with limited agreed approaches.
- Limited data: Limited agreement on data, especially when considering the mitigation of practices at a local level. In addition, limited baseline data for use at the farm level to access schemes.
- Monitoring and verification challenges: Monitoring and verifying emissions at the farm level poses significant challenges, including limited national systems and a need to balance efforts with additional cost/time for landholders.
- Limited technological solutions: Within existing production systems, there are limited existing technology solutions to reduce agricultural emissions in large volumes. The land component of the sector is currently a net sink with significant potential for additional land-based carbon removal.

Accordingly, the following approach has been taken to identify and assess specific activities and measures that contribute to climate change mitigation and are deemed appropriate for inclusion in the taxonomy:

1. Initial review and identification of activities, practices and measures that support climate change mitigation (through direct mitigation and carbon sequestration) across relevant global and Australian frameworks and sources. This review compiled an initial list of activities, practices and measures that yield the greatest outcomes, present low risk and are consistently referenced across various sources.
2. The listed activities, practices and measures were evaluated for their suitability in the Australian context and adjusted as necessary to improve relevance.
3. The list was then prioritised and refined using the Intergovernmental Panel on Climate Change's (IPCC) Uncertainty Guidance to assess each measure by:
   - The level of confidence in findings by evaluating the evidence base (limited, medium or robust) and agreement or consensus within the scientific community (low, medium or high)
   - The degree of likelihood of climate mitigation outcomes based on existing metrics and/or expert views (very likely, likely, unlikely)

Green activity criteria

Activities are classified as green when they represent significant mitigation potential with 'very high' to 'high' confidence and 'very high' to 'high' likelihood of supporting climate change mitigation outcomes across the entire activity. The criteria can be outlined as eligible activities that meet these four requirements:

1. Established 'very high' or 'high' confidence of substantial contribution to climate mitigation.
2. Established 'very high' or 'high' likelihood of substantial contribution to climate mitigation.
3. Established and clearly defined mitigation thresholds and/or metrics that can be measured and monitored to reduce emissions across the entire activity.

Transition criteria: decarbonisation measures

This classification pertains to decarbonisation measures that can be applied to an activity and there is 'very high' to 'medium' confidence and 'very high' to 'medium' likelihood that the measure will support decarbonisation of the activity but, at present, have well established or feasible methods and/or metrics to measure and monitor their contribution to climate mitigation outcomes across the entire activity. The criteria can be outlined as eligible measures that meet these four requirements:

1. Established 'very high' to 'medium' confidence of substantial contribution to climate mitigation to the activity.
2. Established 'very high' to 'medium / likelihood of substantial contribution to climate mitigation to the activity.
3. Do not have defined mitigation thresholds and/or metrics for monitoring and measurement of emissions reduction for the whole activity.

Decarbonisation measures do not make the whole activity green; however, they enable capital investment in measures that support good land management practices and where there is a reasonable likelihood that the measures will help transition the activity towards green.

The classifications will be reassessed in future updates to the taxonomy as new data, measurement and technology evolves.

C. Activity boundary

The boundary of eligible activities for the agriculture and land sector is, 'gate to gate'. It includes everything that happens on a farm or land asset, such as planting, harvesting, and managing resources, as well as energy use and transport. This approach considers the entire supply chain, including the sourcing of inputs and the impacts of land-use changes. More specifically, activity boundaries within each sub-sector are:

Agriculture

- All practices involved in agricultural production that occur "on-farm", including inputs, processes and outputs (Figure 11). This also covers emissions associated with energy use and transport within the farm and upstream practices such as land-use change and feed and chemicals (like fertilisers and pesticides) procurement.
- All practices beyond the farmgate are excluded, with the exception of practices that support climate mitigation efforts of the activity, including specialised infrastructure and equipment and enabling activities (e.g. R&D, M&E and training and capacity building). These supporting practices are grouped as a separate activity.

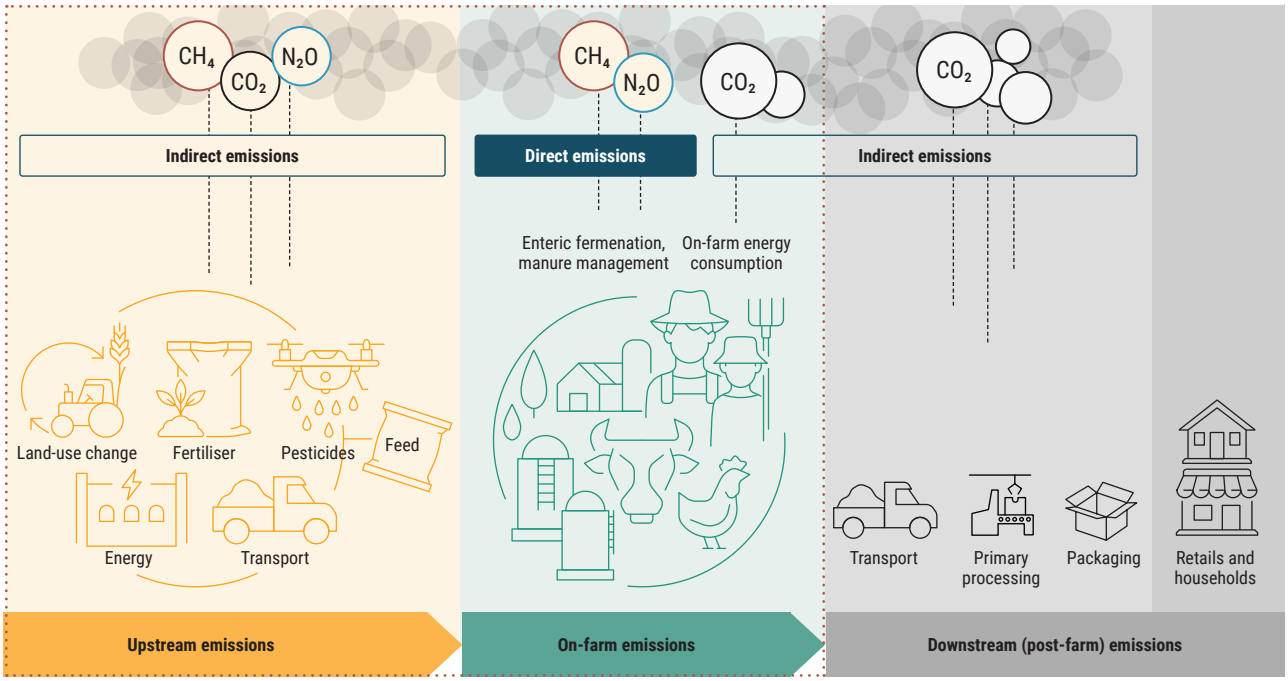
Forest and (other) Natural Ecosystems (LULUCF)

All practices within the boundary of the forest or natural ecosystem that support carbon sequestration, including:

- Practices related to carbon sinks and sources resulting from changes to land use and vegetation cover, such as land clearing, forest management of both native or plantation forests on public and private land.
- Restoration and conservation activities and practices, including reforestation, afforestation and ecosystem conservation or restoration.
- All practices beyond the boundary of the forest or natural ecosystem are excluded, except when they clearly enable climate mitigation within the sub-sector (e.g. infrastructure, R&D, training and capacity building).

All criteria for this phase of work are focused on contributing to climate mitigation, which covers reducing emissions (in agriculture) and/or sequestering carbon (in lands dedicated to agriculture, forestry or natural ecosystems).

FIGURE 11
Boundary of activities in scope for agriculture production



Activity selection

The scope of activities in the agriculture and land sector have been grouped due to their intrinsic characteristics in three main sub-sectors:

- Agriculture,
- Forestry and
- (other) Natural Ecosystems Management.

Each includes relevant high-level direct and supporting activities.

Direct activities include sub- categories, such as cropping, animal production, forest and savannah management, among others.

Supporting activities are those that take place outside the boundary of the activity but support its decarbonisation efforts and innovation, such as Research and development (R&D) and the acquisition of Monitoring and Evaluation (M&E) technologies.

Table 5 summarises the sub-sectors and scope of agricultural activities and Table 2 covers forestry and (other) natural ecosystem management covered by the initial development phase of the taxonomy.

TABLE 5

Agriculture and land green activities and decarbonisation measures (transition criteria)

		Classification	
		Green	Decarbonisation measures
Agriculture	Perennial and non-perennial crops (incl. horticulture and rice production)		✓
	Animal production (incl. grazing)		✓
	Support activities for agriculture and post-harvest		✓
Forestry	Afforestation, Reforestation and Rehabilitation	✓	
	Existing forest management	✓	
	Conservation forestry	✓	
	Support services for forestry		✓
Other land management (natural ecosystems)	Conservation of natural ecosystems	✓	
	Restoration and rehabilitation of ecosystems	✓	
	Savannah management using Indigenous Cultural Practices		✓
	Support services for natural ecosystems		✓

D. Technical Screening Criteria

Agriculture

The agricultural decarbonisation measures listed below are inconsistent with the Taxonomy if the underlying agricultural activities result in the clearing of natural forests and/or wetlands (see **Appendix 2** for definitions).

A1. Cropping: perennial and non-perennial (including horticulture and rice production)

Sector	Agriculture and Land
Activity	A1. Cropping: perennial and non-perennial (including horticulture)
Associated ANZSIC codes	0121-23, 0149, 0151,
Objective	Climate change mitigation
	Technical screening criteria
Decarbonisation measures	**A1.1 Crop Nutrient Management** Improved nutrient use efficiency to reduce nitrous oxide emissions from nitrogen (N) fertiliser using enhanced efficiency fertilisers (EEFs) incorporating inhibitors. **Process and requirements** A. Develop and implement a comprehensive nutrient management plan based on soil type, crop needs and considering local risk of leaching denitrification. The plan must outline and document at least one of the following metrics, including measurements and projected timelines: — *increase the share of nitrification-inhibitor-based enhanced efficiency fertilisers (EEFs) to be greater than regular synthetic N fertiliser use* — *reduction of N inputs per year aimed at achieving optimum application rate based on local/regional averages* — *increase Nitrogen Use Efficiency (NUE) aimed at achieving high NUE relative to optimum local averages .* B. The measure must comply with all of the below: 1. Nitrification-inhibitor-based EEFs must be purchased from manufacturers that are registered members of Fertiliser Australia. 2. Fertilisers must have been treated in Australia with the inhibitor, and not imported as a treated product due to limited shelf life. 3. Use must comply with Fertiliser Australia Code of practice, including attention to crop and livestock withholding periods. **Eligible measures** One or more of the following: • Agronomic Services & Soil Testing – to define application appropriate to soil and crop needs • Purchase of fertiliser treated with nitrification inhibitor (DMPP*, DCD** based chemistry) from a manufacturer registered with Fertiliser Australia. • Variable rate controllers • Installation of irrigation systems and micro sprinklers for controlled application of fertiliser * DMPP = 3,4 dimethylpyrazole-phosphate; **DCD = Dicycandiamide **Exclusions** • EEFs which include products with urease inhibitors and polymer-coated urea (PCU) due to high risk of leaching or volatilisation. **Monitoring** Reporting against the nutrient management plan, detailing at least one of the following metrics against the baseline, including measurements and projected timelines: • increase the share of nitrification-inhibitor-based enhanced efficiency fertilisers (EEFs) to be greater than regular synthetic N fertiliser use • reduction of N inputs per year aimed at achieving optimum application rate based on local / regional averages • increase Nitrogen Use Efficiency (NUE) aimed at achieving high NUE relative to optimum local averages

Decarbonisation measures	**A1.2 Increase in soil organic carbon** Increase soil carbon in cropping system, including perennial woody horticulture, by undertaking one or more land management practices below. **Process and requirements** The measure must comprise all of the following: A. Develop and maintain a comprehensive soil management plan based on soil type, that outlines one or more of the practices listed below to be undertaken and the projected timelines. B. Baseline assessment: conduct soil carbon testing at measure/s commencement. C. Monitoring: perform soil carbon level testing every 1 to 5 years to track changes and progress. D. Demonstrate carbon input has increased or is maintained relative to baseline assessment based on a 5-year rolling average. **Eligible practices** One or more of the following: • Applying variable rate lime to remediate acid soils • Applying gypsum to remediate sodic or magnesic soils • Re-establishing or rejuvenating pastures through seeding, establishment or pasture cropping • Establishing, and permanently maintaining, thriving pastures in areas previously devoid of or with limited pasture • Implementing new irrigation practices sustainably, to increase water use efficiency without increasing unsustainable water extraction or affecting water availability of others • Retaining stubble after crop harvest • Transitioning from intensive tillage to reduced or no-till practices • Modifying landscape or landform features to restore or remediate land • Using mechanical methods to add or redistribute soil • Integrating legume species into cropping systems • Utilising cover crops to enhance soil vegetation cover and improve soil health. **Eligible measures** One or more of the following**:** • Agronomic Services & Soil Testing – to establish baseline, ongoing monitoring and define application appropriate to soil needs • Variable rate controllers • Purchase of lime and other remediating inputs • Installation of irrigation systems and micro sprinklers **Exclusions and restrictions** • The project area where the measures are being applied must have at least 30cm of soil depth • Land on which the activity is being applied must not be a natural forest or contain organosols, also know as peat soils. **Monitoring** Ongoing sequestration potential can be measured and reported using FullCAM , LOOC-C or a similar tool.
Notes	Aligned with ACCU method: Estimating soil organic carbon sequestration using measurement and models method

Decarbonisation measures	**A1.3 Improved Rice Management** Improved rice production through effective water management and residue straw management by implementing practices aimed at reducing days of flooding by at least 10 percent. **Process and requirements** A. The measure must comprise a comprehensive rice production management plan that demonstrates a reduction in days of flooding by at least 10 percent by outlining one or more of the eligible practices. **Eligible practices** One or more of the following: • Shallow Flooding: utilising shallow water levels to optimise growth. • Direct-Seeded Rice: planting rice directly in the field for improved establishment. • Short-Duration, High-Yielding Varieties: selecting varieties that mature quickly while maximising yield. • Midseason Drying Events: allowing the field to dry midway through the growing season to enhance soil health. • Alternate Wet and Dry Techniques: alternating between wet and dry conditions to conserve water and improve rice quality. • Off-Season Straw Management: properly managing straw during the off-season to benefit soil health. **Eligible measures** One or more of the following: • Agronomic Services – to establish baseline, ongoing monitoring and development of a rice production management plan and annual reporting • Installation costs for irrigation and drainage systems and associated earthworks and pipe installation • Purchasing of precision agriculture technology, including soil moisture sensors, weather stations and data analysis **Monitoring** Annual reporting of number of days of flooding.
Decarbonisation measures	**A1.4 Application of biochar to agriculture lands** Application of biochar produced with biomass residues that are derived from existing supply chains and that do not require dedicated production out of arable land. **Process and requirements** The measure must comprise all of the following: A. Develop and maintain a comprehensive management plan that outlines practice to be undertaken and their projected timelines. B. Baseline assessment: conduct soil carbon testing at measure/s commencement. C. Monitoring: perform soil carbon level testing every 1 to 5 years to track changes and progress. D. Carbon input increases or is maintained relative to baseline assessment based on a 5-year rolling average. **Requirements and exclusions** • Only waste and residues are eligible, including fallen wood. • Dedicated crops or wood production are not eligible. **Eligible measures** One or more of the following: • Agronomic Services & Soil Testing – to define application appropriate to soil needs • Natural Resource Management (NRM) services for planning, baselining and monitoring • Purchase of an on-farm pyrolysis unit **Monitoring** Ongoing sequestration potential can be measured and reported using FullCAM , LOOC-C or a similar tool.

Decarbonisation measures	**A1.5 Agroforestry** Implement or maintain agroforestry, i.e. incorporating woody perennials into crop production units. **Process and requirements** A. Development and implementation of a comprehensive crop system management plan that evaluates the landscape including soil condition, climate, and water availability and includes a baseline carbon stock assessment and expected sequestration potential. B. The measure must comprise all of the following: 1. Intentional integration of woody perennials alongside crop production units. 2. Utilise the same land for various agricultural purposes. 3. Spatial or temporal arrangement of components for optimal synergy. 4. Plantings must have the potential to grow to two metres tall and have crown cover of the least 20 percent of the project area. Project areas can take many forms including block plantings or strip plantings for shelter belts. **Eligible measures** One or more of the following: • Seedling stock of appropriate species • Establishment infra-structure, including protection and irrigation • Fencing materials • Natural Resource Management (NRM) and/or Agronomic services for planning, baselining and monitoring • Ground-work services or equipment hire for site preparation or fencing • Labour services for planting, maintenance, and ongoing protection **Monitoring** Monitoring must comprise one of the following: • Aerial imagery (pre/post) as evidence of area planted (ha) • Annual on-ground observation and/or remote sensed imagery to show continued crown cover of greater than 20 percent • Estimated carbon sequestration via FullCAM or LOOC-C
Decarbonisation measures	**A1.6 Renewable energy and storage** Renewable energy production and storage solutions for on-farm use. **Requirements** A. The measure must ensure all of the following: 1. Solar infrastructure meets Australian Standards, 2. Rechargeable storage is renewable compatible and is approved by the Clean Energy Council's Battery Assurance Program. 3. Quality assurance and compliance with safety standards and regulations at time of commission **Eligible measures** One or more of the following: • Solar PV technologies (ground mounted or root-top) that meet Australian Standards and/or purchased from a Clean Energy Approved Solar Retailer. • Rechargeable storage batteries compatible with renewable source and approved by the Clean Energy Council's Battery Assurance Program, and installed behind the meter • Installation services
Decarbonisation measures	**A1.7 Purchases of electric and energy efficient farm vehicles and equipment** **Eligible measures** Replacement of existing diesel fleet with one or more of the following: • Eligible* energy efficient tractors, headers, harvesters* • Heavy and light vehicles and aerial transport that comply with the Taxonomy Transport criteria (I1, I3, I4, I5, I6). Eligible** installations to equip new fleet for: • GPS Auto-Steer and/or Controlled traffic • Precision or Variable Rate technologies*

Notes	* Eligible energy efficient tractors, headers and harvesters are: Purchase of new tractors, headers and other self-propelled machinery, which may include reconfiguration of existing equipment, which results in: (a) at least 20% less energy consumed per unit of output; or (b) an overall energy saving of at least 20%; or (c) publicly available information confirming its class leading energy efficiency characteristics. Purchase of new hydrogen fuel cell tractors, headers and other self-propelled machinery, which may include reconfiguration of existing equipment. Purchase of new fully autonomous tractors, headers and other self-propelled machinery, which may include reconfiguration of existing equipment. Purchase of a new agricultural trailed vehicle, which results in: (d) at least 10% less energy consumed per unit of area (i.e. L/ha); or (e) is designed for no or zero-tillage planting and seeding. **Eligible installations to equip new fleet include: GPS precision guidance and auto-steer technology, which is fitted to new and existing on farm machinery. Yield monitors and other sensors which provide real-time information and feedback to growers.
Decarbonisation measures	**A1.8 Low emissions cold storage** The purchase and installation of cold storage equipment that meets the energy efficiency standards and GWP limits set out in the Taxonomy Building Criteria (B1).
Decarbonisation measures	**A1.9 Management practices for generation of carbon credits (ACCUs)** Implementation of management practices and establishment expenditures required to participate in the Australian Government's Australian Carbon Credit Unit (ACCU) scheme for carbon credit generation (ACCUs) under the Agriculture Methods. **Eligible measures** One or more of the following: • Site development costs: Expenses associated with preparing the site for carbon credit practices. • Initial investment costs: Upfront financial commitments required for project implementation. • Planning and assessment costs: Costs related to project planning and environmental assessments. • Application and registration costs: Fees for applying to and registering in the ACCU scheme. • Audit and reporting costs: Expenses for compliance audits and ongoing reporting requirements. **Exclusions and restrictions** Methods must not be expired at time of financing.

A2. Animal Production

Sector	Agriculture and Land
Activity	A2. Animal Production (including grazing)
Associated ANZSIC codes	0141 - 0145 0171, 0172, 0192, 0199
Objective	Climate change mitigation

Technical screening criteria

A2.1 Nutrient management

Improved nutrient use efficiency to reduce nitrous oxide emissions from nitrogen (N) fertiliser using enhanced efficiency fertilisers (EEFs) incorporating inhibitors.

Process and requirements

A. Develop and implement a comprehensive nutrient management plan based on soil type, crop needs and considering local risk of leaching denitrification. The plan must outline and document at least one of the following metrics, including measurements and projected timelines:
   - *increase the share of nitrification-inhibitor-based enhanced efficiency fertilisers (EEFs) to be greater than regular synthetic N fertiliser use*
   - *reduction of N inputs per year aimed at achieving optimum application rate based on local / regional averages*
   - *increase Nitrogen Use Efficiency (NUE) aimed at achieving high NUE relative to optimum local averages .*

B. The measure must comply with all of the below:
   1. Nitrification-inhibitor-based EEFs must be purchased from manufacturers that are registered members of Fertiliser Australia.
   2. Fertilisers must have been treated in Australia with the inhibitor, and not imported as a treated product due to limited shelf life.
   3. Use must comply with Fertiliser Australia Code of practice, including attention to crop and livestock withholding periods.

Eligible measures

One or more of the following:

- Agronomic Services & Soil Testing – to define application appropriate to soil and crop needs
- Purchase of fertiliser treated with nitrification inhibitor (DMPP*, DCD** based chemistry) from a manufacturer registered with Fertiliser Australia.
- Variable rate controllers
- Installation of irrigation systems and micro sprinklers for controlled application of fertiliser

* DMPP = 3,4 dimethylpyrazole-phosphate;
**DCD = Dicycandiamide

Exclusions and restrictions

- EEFs which include products with urease inhibitors and polymer-coated urea (PCU) due to high risk of leaching or volatilisation.

Monitoring

Reporting against the nutrient management plan, detailing at least one of the following metrics against the baseline, including measurements and projected timelines:

- increase the share of nitrification-inhibitor-based enhanced efficiency fertilisers (EEFs) to be greater than regular synthetic N fertiliser use
- reduction of N inputs per year aimed at achieving optimum application rate based on local/regional averages
- increase Nitrogen Use Efficiency (NUE) aimed at achieving high NUE relative to optimum local averages

Decarbonisation measures	**A2.2 Increase in soil organic carbon** Increase soil carbon in grazing system by undertaking one or more land management practices to increase soil carbon. **Process and requirements** The measure must comprise all of the following: A. Develop and maintain a comprehensive management plan that outlines one or more of the practices listed below to be undertaken and the projected timelines. B. Baseline assessment: conduct soil carbon testing at measure/s commencement. C. Monitoring: perform soil carbon level testing every 1 to 5 years to track changes and progress. D. Demonstrate carbon input has increased or is maintained relative to baseline assessment based on a 5-year rolling average. **Eligible practices** Implement one or more of the following practices to demonstrate an increase in soil carbon through soil sampling and modelling: • Applying lime to remediate acid soils • Applying gypsum to remediate sodic or magnesic soils • Re-establishing or rejuvenating pastures through seeding, establishment or pasture cropping • Establishing, and permanently maintaining, thriving pastures in areas previously devoid of or with limited pasture • Adjusting stocking rate, grazing duration, or intensity of grazing practices • Implementing new irrigation practices sustainably, to increase water use efficiency without increasing unsustainable water extraction or affecting water availability of others • Modifying landscape or landform features to restore or remediate land • Using mechanical methods to add or redistribute soil • Integrating legume species into pasture system. **Eligible measures** One or more of the following**:** • Agronomic Services & Soil Testing – to establish baseline, ongoing monitoring and define application appropriate to soil needs • Variable rate controllers • Purchase of lime and other remediating inputs • Installation of irrigation systems and micro sprinklers **Exclusions and restrictions** • The project area where the measures are being applied must have at least 30cm of soil depth • Land on which the activity is being applied must not be a natural forest or contain organosols, also know as peat soils. **Monitoring** Ongoing sequestration potential can be measured and reported using FullCAM , LOOC-C or a similar tool.
Notes	Aligned with ACCU method: Estimating soil organic carbon sequestration using measurement and models method

Decarbonisation measures	**A2.4 Application of biochar to agriculture lands** Application of biochar produced with biomass residues that are derived from existing supply chains and that do not require dedicated production out of arable land. **Process and requirements** The measure must comprise all of the following: A. Develop and maintain a comprehensive management plan that outlines practice to be undertaken and their projected timelines. B. Baseline assessment: conduct soil carbon testing at measure/s commencement. C. Monitoring: perform soil carbon level testing every 1 to 5 years to track changes and progress. D. Carbon input increases or is maintained relative to baseline assessment based on a 5-year rolling average. E**xclusions** • Only waste and residues are eligible, including fallen wood. • Dedicated crops or wood production are not eligible. **Eligible measures** One or more of the following: • Agronomic Services & Soil Testing – to define application appropriate to soil needs • Natural Resource Management (NRM) services for planning, baselining and monitoring • Purchase of an on-farm pyrolysis unit **Monitoring** Ongoing sequestration potential can be measured and reported using FullCAM , LOOC-C or a similar tool.
Decarbonisation measures	**A2.5 Agroforestry** Establishment or maintenance of silvopastoral systems that promote the intentional integration of woody vegetation with animal production. **Process and requirements** A. Development and implementation of a comprehensive silvopastoral management plan that evaluates the landscape including soil condition, climate, and water availability and includes baseline carbon stock assessment and expected sequestration potential. B. The measure must comprise all of the following: 1. Intentional integration of woody perennials alongside Livestock production units. 2. Utilise the same land for various agricultural purposes. 3. Spatial or temporal arrangement of components for optimal synergy. 4. Plantings must have the potential to grow to two metres tall and have crown cover of the least 20% of the project area. Project areas can take many forms including block plantings or strip plantings for shelter belts. **Eligible measures** One or more of the following: • Seedling stock of appropriate species • Establishment infra-structure, including protection and irrigation • Fencing materials • Natural Resource Management (NRM) and/or Agronomic services for planning, baselining and monitoring • Ground-work services or equipment hire for site preparation or fencing • Labour services for planting, maintenance, and ongoing protection **Monitoring** Monitoring must comprise one of the following: • Aerial imagery (pre/post) as evidence of area planted (ha) • Annual on-ground observation and/or remote sensed imagery to show continued crown cover of greater than 20% • Estimated carbon sequestration via FullCAM or LOOC-C or similar tool.

Decarbonisation measures	**A2.6 Methane Inhibitors - Feed supplements** Ruminant animals are fed or administered methane inhibitors to directly reduce methane production by either blocking enzymes involved in producing methane, or in promoting alternative fermentation pathways. **Process** The measure must comprise all of the following: A. Develop and maintain a comprehensive feed management plan that outlines the feed additive technologies to be utilised and their projected timelines. B. Baseline assessment: conduct a baseline of business-as-usual (BAU) practices prior to measure commencement. C. Monitoring: implement a data collection and measurement system for third party verification. D. Report percentage reduction in enteric methane emissions for treated herd from established based, verified through a third-party assessment **Feed requirements** E. Feed must comply with the Australian Pesticides and Veterinary Medicines Authority (APVMA) requirements and other relevant regulatory bodies; and F. Feed must have a proven efficacy capable of achieving minimum effective inclusion level (MEIL) of > 20% methane reduction. The APVMA provide a list of approved feed supplements that meet these requirements in their website **Eligible measures** One or more of the following: • Advisory services associated with selection, dosing, and compliance aspects in the use of methane inhibitors. • Purchase of APVMA approved supplement, or MEIL documented feed material, that achieves a > 20% methane reduction. • Equipment for supplement storage or ration mixing **Monitoring** • Annual report capturing enterprise emissions baseline and estimation of emissions reduction
Notes	Feed material recognised as not requiring APVMA approval or already approved and documented as capable of achieving MEIL at low doses (e.g.<0.5% daily diet) includes Asparagopsis in dried forms, 3 NOP as Bovear, Agolin.

Decarbonisation measures	**A2.7 Manure management** Minimise methane emissions by removing volatile solids and treating them through aerobic processes in piggeries and dairies. **Process and requirements** The measure must comprise all of the following**:** A. Develop and maintain a comprehensive project management plan that outlines the practice/s to be utilised and their projected timelines. B. Baseline assessment: conduct a baseline of business-as-usual (BAU) practices prior to measure commencement. C. Monitoring: implement a data collection and measurement system for third party verification. D. Measurement and Reporting: continuous measurement of biogas and biomethane is required, with cumulative data collected over the reporting period. The measuring equipment must be regularly calibrated by a certified technician to ensure accuracy. The volume of biogas and biomethane must be monitored using methods consistent with the National Greenhouse and Energy Reporting (NGER) Determination. **Eligible Practices** The following practices are eligible: 1. Emissions destruction • Biogas production: produce biogas from organic effluent using anaerobic digestion in either a covered pond or anaerobic digester tank. • Methane capture: capture and destroy the methane component of biogas from the organic effluent through flaring or generating electricity. Emissions destruction practices listed above must comply with the Taxonomy Electricity Generation and Supply criteria for the generation of bioenergy and the Taxonomy Manufacturing & Industry criteria for the generation of biogas. 2. Emissions avoidance • Volatile solids removal: remove material containing volatile solids to reduce methane emissions (diversion of the material). • Aerobic treatment: treat the diverted material aerobically, resulting in significantly lower total methane and nitrous oxide emissions compared to anaerobic pond treatment (a post diversion treatment). 3. Biogas production for biomethane • Biogas production: produce biogas from organic effluent using anaerobic digestion in either a covered pond or anaerobic digester tank. • Biogas upgrading: send the produced biogas to a biogas upgrading system to produce biomethane. Biogas production practices listed above must comply with the Taxonomy Manufacturing & Industry criteria for the generation of biogas. 4. Biomethane production Biogas reception: receive biogas for processing • Biogas upgrading system: utilise a biogas upgrading system to produce biomethane. Biomethane production practices listed above must comply with the Taxonomy Manufacturing & Industry criteria for the generation of biogas. **Eligible measures** • CapEx for construction of covered pond or anaerobic digester tank • Installation services
Notes	Aligns with ACCU method: Animal effluent management method

Decarbonisation measures	**A2.8 Savannah fire management using Indigenous cultural burning for grazing lands** Reintroducing controlled burning during the early dry season to mitigate the frequency and severity of fires in the late dry season. **Process and Requirements** A. Must include annual planned burns as part of an agreed-upon management plan that outlines the intended activities and is regularly updated to accurately reflect conditions at the planned time of the controlled burning. B. Early dry season fire management may be complemented by late dry season fire management activities, such as constructing fire breaks. C. Fire management activities should be tailored to the local landscape and prevailing weather conditions. Activities may include igniting strategic and planned fires: • From aircrafts • From vehicles • By walking across the land with handheld drip torches. **Exclusions and restrictions** This measure is applicable to land within the high or low rainfall zones of northern Australia that support suitable savanna vegetation types. **Eligible measures** • Operational costs including aerial ignition hire, safety gear, ranger wages • Monitoring and evaluation and consultant services for reporting. **Monitoring** Net abatement for the plan can be calculated either manually, following the process outlined in the ACCU scheme's 'Savannah method', or through the Savannah Burning Abatement Tool (SavBAT).
Decarbonisation measures	**A2.9 Renewable energy and storage** All measures applicable under A1.6
Decarbonisation measures	**A2.10 Purchases of electric and energy efficient farm vehicles and equipment** All measures applicable under A1.7
Decarbonisation measures	**A2.11 Management practices for generation of carbon credits (ACCUs)** Implementation of management practices and establishment expenditures required to participate in the Australian Government's Australian Carbon Credit Unit (ACCU) scheme for carbon credit generation (ACCUs) under the Agriculture Methods. **Eligible measures** • Site development costs: Expenses associated with preparing the site for carbon credit practices. • Initial investment costs: Upfront financial commitments required for project implementation. • Planning and assessment costs: Costs related to project planning and environmental assessments. • Application and registration costs: Fees for applying to and registering in the ACCU scheme. **Exclusions and restrictions** Methods must not be expired at time of financing.

A3. Support activities for agriculture and post-harvest

Support Measures	**Agriculture Support Measures** All of the measures listed below are eligible: • Mitigation options R&D: research of mitigation strategies and practices that align with the activities and/or measures outlined in the Taxonomy. • Training and capacity building targeting mitigation options • Measurement and monitoring technologies targeting mitigation objectives including GHG measurement and monitoring, special positioning and guidance systems, harvest or yield monitors and data connectivity solutions.

Forestry

A4. Afforestation, reforestation and rehabilitation

Sector	Agriculture and Land
Activity	A4. Afforestation, reforestation and rehabilitation
Associated ANZSIC codes	0301,0510
Objective	Climate change mitigation
	Technical screening criteria
Green	**A4.1 Establishment of a permanent forest** Establish a permanent forest on land that has been grazed, cropped or fallow for the past 5 years, or the reforestation of previously forested land back to a forest, ensuring the site can support new forest growth for a minimum of 25 years. To be eligible the land on which the activity is being applied must not have been subject to clearing of a natural forest or draining of a wetland since 31 December 2020. **Process** The activity must comply with all of the following: A. Develop a comprehensive management plan that outlines the number of trees to be planted per hectare to achieve the desired forest cover. B. Implement a data collection and measurement system C. Carbon input should increase by at least 0.20 t C per hectare per year until saturation point, based on a 5-year rolling average. D. All forest products harvested from the activity must comply with and be certified under the Forest Stewardship Council (FSC) or the Program for the Endorsement of Forest Certification (PEFC) **Eligible Measures** The following management practices and establishment expenditures are eligible as part of the activity: • Land acquisition. • Purchase of equipment and cost of resources needed for ongoing maintenance and management. • Installation, upgrades or maintenance of warning systems or satellite monitoring for fire, illegal incursions, epidemics, invasive species, floods, and drought conditions. • Costs associated with setting-up and maintaining protection measures, including rangers and monitoring equipment, as well as GIS analysis, satellite data collection and data analysis. **Establishment restrictions** 1. One preparation burn per strata is permitted before planting. 2. Fertiliser application is allowed for each strata only once every 25 years. **Monitoring** Carbon abatement is calculated by measuring the change in the amount of carbon stored within the project area through: • Tree growth • Natural decay • Disturbance events, including emissions from fire and fuel used for project establishment and maintenance Ongoing sequestration potential can be measured and reported using FullCAM , LOOC-C or a similar tool. Infield measurements via: — *Field inventory: measuring sufficient plots within each strata.* — *Permanent sample plot assessment: establishing permanently marked plots with fixed locations.* • Independent verification. Carbon dioxide equivalent net abatement must be calculated by subtracting activity emissions from activity removals, as outlined in the Carbon Farming Initiative—Reforestation and Afforestation 2.0 - Methodology Determination 2015.
Notes	Aligned to ACCU method: Carbon Credits (Carbon Farming Initiative—Reforestation and Afforestation 2.0) Methodology Determination 2015 Definitions for land clearing criteria and requirements to demonstrate compliance are set out in **Appendix 2**.
Decarbonisation measures	**A4.2 Renewable energy and storage** All eligible measures under A1.6

Decarbonisation measures	**A4.3 Purchases of electric and energy efficient forestry vehicles and equipment** All eligible measures under A1.7
Green	**A4.4 Management practices for generation ACCUs** Implementation of management practices and establishment expenditures required to participate in the Australian Government's Australian Carbon Credit Unit (ACCU) scheme for carbon credit generation (ACCUs) under the following vegetation methods: • Measurement based methods for new farm forestry plantations method • Plantation forestry method • Reforestation and afforestation 2.0 method • Reforestation by Environmental or Mallee Plantings – FullCAM method **Eligible measures:** • Site development costs: Expenses associated with preparing the site for carbon credit practices. • Initial investment costs: Upfront financial commitments required for project implementation. • Planning and assessment costs: Costs related to project planning and environmental assessments. • Application and registration costs: Fees for applying to and registering in the ACCU scheme. • Audit and reporting costs: Expenses for compliance audits and ongoing reporting requirements. **Exclusions and restrictions** Methods must not be expired at time of financing.

A5. Existing Forest Management

Sector	Agriculture and Land
Activity	A5.1 Existing Forest Management
Associated ANZSIC codes	0301, 0510
Objective	Climate change mitigation
	Technical screening criteria
Green	**A5.1 Forest management** Existing forests are managed to maintain or increase both above and below-ground carbon stocks. To be eligible, the land on which the activity is being applied must not have been subject to clearing of a natural forest or draining of a wetland since 31 December 2020. **Process** The activity must comply with all of the following: A. Implement a data collection and measurement system must be put in place. B. Baseline assessment must be undertaken at the commencement of the activity to establish carbon stocks. C. Demonstrate carbon input has increased or is maintained relative to baseline assessment based on a 5-year rolling average. D. All forest products harvested from the activity must comply with and be certified under the Forest Stewardship Council (FSC) or the Program for the Endorsement of Forest Certification (PEFC) **Eligible Measures** The following management practices and establishment expenditures are eligible as part of the activity: • Purchase of equipment and cost of resources needed for ongoing maintenance and management. • Installation, upgrades or maintenance of warning systems or satellite monitoring for fire, illegal incursions, epidemics, invasive species, floods, and drought conditions. • Costs associated with setting-up and maintaining protection measures, including rangers and monitoring equipment, as well as GIS analysis, satellite data collection and data analysis. **Monitoring** Carbon abatement is calculated by measuring the change in the amount of carbon stored within the project area through: • Tree growth • Natural decay • Disturbance events, including emissions from fire and fuel used for project establishment and maintenance Ongoing sequestration potential can be measured and reported using FullCAM, LOOC-C or a similar tool. Infield measurements via: — *Field inventory: measuring sufficient plots within each strata* — *Permanent sample plot assessment: establishing permanently marked plots with fixed locations* • Independent verification
Notes	Definitions for land clearing criteria and requirements to demonstrate compliance are set out in **Appendix 2**.
Decarbonisation measures	**A5.2 Renewable energy and storage** Eligible measures under A1.6
Decarbonisation measures	**A5.3 Purchases of electric and energy efficient forestry vehicles and equipment** Eligible measures under A1.7
Green	**A5.4 Management practices for generation ACCUs** Implementation of management practices and establishment expenditures required to participate in the Australian Government's Australian Carbon Credit Unit (ACCU) scheme for carbon credit generation (ACCUs) under the following vegetation methods: • Measurement based methods for new farm forestry plantations method • Plantation forestry method • Reforestation and afforestation 2.0 method • Reforestation by Environmental or Mallee Plantings – FullCAM method **Eligible measures:** • Site development costs: Expenses associated with preparing the site for carbon credit practices. • Initial investment costs: Upfront financial commitments required for project implementation. • Planning and assessment costs: Costs related to project planning and environmental assessments. • Application and registration costs: Fees for applying to and registering in the ACCU scheme. • Audit and reporting costs: Expenses for compliance audits and ongoing reporting requirements. **Exclusions and restrictions** Methods must not be expired at time of financing.

A6. Conservation forestry

Sector	Agriculture and Land
Activity	A6 Conservation forestry
Associated ANZSIC codes	0301, 0510
Objective	Climate change mitigation
	Technical screening criteria
Green	**A6.1 Conservation forestry** Activities in non-commercial forests aimed at preserving one or more habitats or species. Conservation forestry assumes no change in existing land category and occurs on land that meets the definition of Natural Forest. To be eligible the land on which the activity is being applied must not have been subject to clearing of a natural forest or draining of a wetland since 31 December 2020. **Process** The activity must comply with all of the following: A. Implement a data collection and measurement system must be put in place. B. Baseline assessment must be undertaken at the commencement of the activity to establish carbon stocks. C. Demonstrate carbon input has increased or is maintained relative to baseline assessment based on a 5-year rolling average. **Eligible Measures** The following management practices and establishment expenditures are eligible as part of the activity: • Purchase of equipment and cost of resources needed for ongoing maintenance and management. • Installation, upgrades or maintenance of warning systems or satellite monitoring for fire, illegal incursions, epidemics, invasive species, floods, and drought conditions. • Costs associated with setting-up and maintaining protection measures, including rangers and monitoring equipment, as well as GIS analysis, satellite data collection and data analysis. **Monitoring** Carbon abatement is calculated by measuring the change in the amount of carbon stored within the project area through: • Tree growth • Natural decay • Disturbance events, including emissions from fire and fuel used for project establishment and maintenance Ongoing sequestration potential can be measured and reported using FullCAM, LOOC-C or a similar tool. Infield measurements via: Field inventory: measuring sufficient plots within each strata. Permanent sample plot assessment: establishing permanently marked plots with fixed locations. • Independent verification. Carbon dioxide equivalent net abatement must be calculated by subtracting activity emissions from activity removals, as outlined in the Carbon Farming Initiative—Reforestation and Afforestation 2.0 - Methodology Determination 2015.
Notes	Definitions for land clearing criteria and requirements to demonstrate compliance are set out in **Appendix 2**.
Decarbonisation measures	**A6.2 Renewable energy and storage** Eligible measures under A1.6
Decarbonisation measures	**A6.3 Purchases of electric and energy efficient forestry vehicles** Eligible measures under A1.7

Green	**A6.4 Management practices for generation ACCUs** Implementation of management practices and establishment expenditures required to participate in the Australian Government's Australian Carbon Credit Unit (ACCU) scheme for carbon credit generation (ACCUs) under the following vegetation methods: • Measurement based methods for new farm forestry plantations method • Plantation forestry method • Reforestation and afforestation 2.0 method • Reforestation by Environmental or Mallee Plantings – FullCAM method **Eligible measures** • Site development costs: Expenses associated with preparing the site for carbon credit practices. • Initial investment costs: Upfront financial commitments required for project implementation. • Planning and assessment costs: Costs related to project planning and environmental assessments. • Application and registration costs: Fees for applying to and registering in the ACCU scheme. • Audit and reporting costs: Expenses for compliance audits and ongoing reporting requirements. **Exclusions and restrictions** Methods must not be expired at time of financing.

A7. Support services for Forestry

Support Measures	**Forestry support measures** • Mitigation options R&D: research of mitigation strategies and practices that align with the activities and/or measures outlined in the Taxonomy • Training and capacity building targeting mitigation options • Measurement and monitoring technologies targeting mitigation objectives including GHG measurement and monitoring

Other Land Management (natural ecosystems)

A8. Restoration and rehabilitation of ecosystems

Sector	Agriculture and Land
Activity	A8.Restoration and rehabilitation of ecosystems
Associated ANZSIC codes	0510, 8922
Objective	Climate change mitigation
	Technical screening criteria
Green	**A8.1 Restoration and rehabilitation of ecosystems** Restoration of degraded land, including: • Mangroves and wetlands • Peatlands • Overgrazed grasslands with depleted soil organic carbon To be eligible the land on which the activity is being applied must not have been subject to clearing of a natural forest or draining of a wetland since 31 December 2020. **Process** The activity must: A. Development and implementation of a comprehensive restoration management plan specifying the restoration activities to be undertaken and includes baseline carbon stock assessment and expected sequestration potential. B. Demonstrate carbon input has increased or is maintained relative to baseline assessment based on a 5-year rolling average. E**ligible measures** Eligible land management practices include: • Land acquisition for purpose of protecting and conserving ecosystem areas that provide a range of ecosystem services. • Land acquisition for purpose of expanding and restoring existing areas and/or establishing new habitats for diverse ecosystem services. • The purchase of equipment and cost of resources needed for the on-going maintenance and management of conservation projects. • Implementation of conservation management practices aimed at preserving one or more habitats or species. • Installation, upgrades or maintenance of warning systems or satellite monitoring for fire, illegal incursions, epidemics, invasive species, floods, and drought conditions. • Costs associated with setting-up and maintaining protection measures, including rangers and monitoring equipment, as well as GIS analysis, satellite data collection and data analysis. M**onitoring:** Measurement of sequestration potential and ongoing reported utilising FullCAM, LOOC-C or a similar tool.
Notes	Definitions for land clearing criteria and requirements to demonstrate compliance are set out in **Appendix 2**.
Decarbonisation measures	**A8.2 Renewable energy and storage** Eligible measures under A1.6
Decarbonisation measures	**A8.3 Purchases of electric and energy efficient forestry vehicles and equipment** Eligible measures under A1.7
Notes	
Green	**A8.4 Management practices for generation ACCUs** Implementation of management practices and establishment expenditures required to participate in the Australian Government's Australian Carbon Credit Unit (ACCU) scheme for carbon credit generation (ACCUs) under following vegetation methods: • Reforestation by Environmental or Mallee Plantings – FullCAM method • Tidal restoration of blue carbon ecosystems method **Eligible measures:** • Site development costs: Expenses associated with preparing the site for carbon credit practices. • Initial investment costs: Upfront financial commitments required for project implementation. • Planning and assessment costs: Costs related to project planning and environmental assessments. • Application and registration costs: Fees for applying to and registering in the ACCU scheme. • Audit and reporting costs: Expenses for compliance audits and ongoing reporting requirements. **Exclusions and restrictions** Methods must not be expired at time of financing.

A9. Savannah management using Indigenous cultural burning techniques

Sector	Agriculture and Land
Activity	A9. Savannah management using Indigenous cultural burning techniques
Associated ANZSIC codes	0510, 8922
Objective	Climate change mitigation
	Technical screening criteria
Decarbonisation measures	**A9.1 Savannah management using Indigenous cultural burning techniques** Reintroducing controlled burning during the early dry season to mitigate the frequency and severity of fires in the late dry season. **Requirements** A. Must include annual planned burns as part of an agreed-upon management plan that outlines the intended activities and is regularly updated to accurately reflect conditions at the planned time of the controlled burning. B. Early dry season fire management may be complemented by late dry season fire management activities, such as constructing fire breaks. C. Fire management activities should be tailored to the local landscape and prevailing weather conditions. **Eligible practices** Activities may include igniting strategic and planned fires: • From aircrafts • From vehicles • By walking across the land with handheld drip torches. **Measures** • Operational costs including aerial ignition hire, safety gear, ranger wages • Monitoring and evaluation and consultant services for reporting. • Monitoring **Exclusions and restrictions** This measure is applicable to land within the high or low rainfall zones of northern Australia that support suitable savanna vegetation types. **Monitoring** Net abatement for the plan can be calculated either manually, following the process outlined in the ACCU scheme's 'Savannah method', or through the Savannah Burning Abatement Tool (SavBAT).
Decarbonisation measures	**A9.2 Renewable energy and storage** Eligible measures under A1.6
Decarbonisation measures	**A9.3 Purchases of electric and energy efficient vehicles and equipment** Eligible measures under A1.7
Decarbonisation measures	**A9.4 Management practices for generation ACCUs** Implementation of management practices and establishment expenditures required to participate in the Australian Government's Australian Carbon Credit Unit (ACCU) scheme for carbon credit generation (ACCUs) under the following vegetation methods: • Savanna fire management - 2018 emissions avoidance method • Savanna fire management - 2018 sequestration and emissions avoidance method **Eligible measures:** • Site development costs: Expenses associated with preparing the site for carbon credit practices. • Initial investment costs: Upfront financial commitments required for project implementation. • Planning and assessment costs: Costs related to project planning and environmental assessments. • Application and registration costs: Fees for applying to and registering in the ACCU scheme. • Audit and reporting costs: Expenses for compliance audits and ongoing reporting requirements. **Exclusions and restrictions** Methods must not be expired at time of financing.

A10. Conservation of natural ecosystems

Sector	Agriculture and Land
Activity	A10. Conservation of natural ecosystems
Associated ANZSIC codes	0510, 8922
Objective	Climate change mitigation
	Technical screening criteria
Green	**A10.1 Conservation of natural ecosystems** Enhance or maintain carbon sinks through the conservation of natural ecosystems, including: • Forests • Mangroves and wetlands • Peatlands • Coastal wetlands • Savannahs and grasslands • Shrublands To be eligible the land on which the activity is being applied must not have been subject to clearing of a natural forest or draining of a wetland since 31 December 2020. **Process** The activity must: A. Development and implementation of a comprehensive conservation management plan specifying the management activities to be undertaken and includes baseline carbon stock assessment and expected sequestration potential. B. Demonstrate carbon input is maintained relative to baseline assessment based on a 5-year rolling average. **Eligible Measures** Eligible land management practices include: • Land acquisition for purpose of protecting and conserving ecosystem areas that provide a range of ecosystem services. • Land acquisition for purpose of expanding and restoring existing areas and/or establishing new habitats for diverse ecosystem services. • The purchase of equipment and cost of resources needed for the on-going maintenance and management of conservation projects. • Implementation of conservation management practices aimed at preserving one or more habitats or species. • Installation, upgrades or maintenance of warning systems or satellite monitoring for fire, illegal incursions, epidemics, invasive species, floods, and drought conditions. • Costs associated with setting-up and maintaining protection measures, including rangers and monitoring equipment, as well as GIS analysis, satellite data collection and data analysis. **Monitoring** Measurement of sequestration potential and ongoing reported utilising FullCAM, LOOC-C or a similar tool.
Notes	Definitions for land clearing criteria and requirements to demonstrate compliance are set out in **Appendix 2**.
Decarbonisation measures	**A10.2 Renewable energy and storage** Eligible measures under A1.6
Decarbonisation measures	**A10.3 Purchases of electric and energy efficient vehicles and equipment** Eligible measures under A1.7
Green	**A10.4 Management practices for generation ACCUs** Implementation of management practices and establishment expenditures required to participate in the Australian Government's Australian Carbon Credit Unit (ACCU) scheme for carbon credit generation (ACCUs) under the following vegetation methods: • Reforestation by Environmental or Mallee Plantings – FullCAM method • Tidal restoration of blue carbon ecosystems method **Eligible measures:** • Site development costs: Expenses associated with preparing the site for carbon credit practices. • Initial investment costs: Upfront financial commitments required for project implementation. • Planning and assessment costs: Costs related to project planning and environmental assessments. • Application and registration costs: Fees for applying to and registering in the ACCU scheme. • Audit and reporting costs: Expenses for compliance audits and ongoing reporting requirements. **Exclusions and restrictions** Methods must not be expired at time of financing.

A11. Support services for natural ecosystems

Support Measures	**Other Land Management (natural ecosystems) support measures** • Mitigation options R&D: research of mitigation strategies and practices that align with the activities and/or measures outlined in the Taxonomy. • Training and capacity building targeting mitigation options • Measurement and monitoring technologies targeting mitigation objectives including GHG measurement and monitoring.

FOR CONSULTATION

3. Are the proposed TSC credible? In this context, credibility of criteria refers to whether a transparent scientific approach aligned to the Paris Agreement temperature goal was used, informed by the latest technological understanding.

4. Are the proposed TSC usable? In this context, usability of criteria refers to whether they are comparable, clear, objective and easy to understand. If not, please explain how they could be improved

5. Are there additional decarbonisation measures or activities that meet the taxonomy qualifying methodology for the agriculture and land sectors, which should be included in the taxonomy? Please provide specific information to justify your recommendation.

6. Please provide any further feedback on specific activities here and provide evidence to support any recommendations.

6. For Consultation: Minerals, Mining and Metals

A. Sector Context

Significant quantities of metals will be needed for clean energy infrastructure and technology to support the global transition to net zero in line with the Paris Agreement.

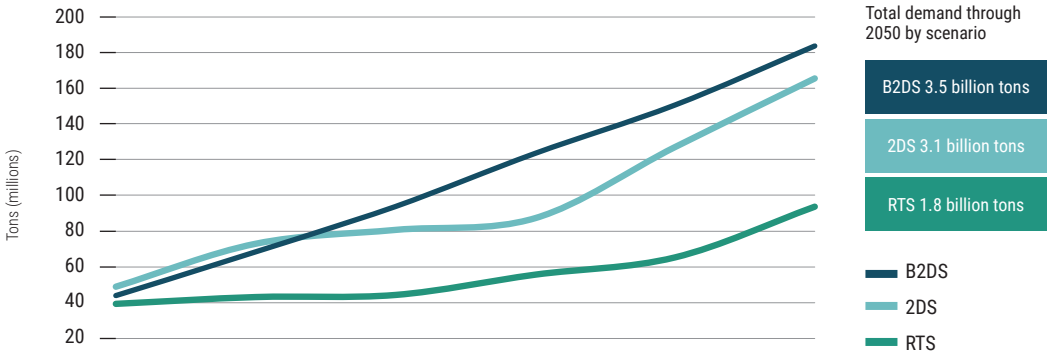
The IEA estimates that in a 'below two degrees' (B2DS) scenario, shown in Figure 12, total demand for metals will reach 3.5 billion tons by 2050. Some of the largest demand rises are likely to be driven by metals used in clean energy infrastructure and technology, including copper, nickel and lithium. As a major minerals producer, Australia is well placed to capitalise on the economic opportunities presented by the demand growth increasingly driven by the global transition.

Additionally, under Australian 1.5°C scenarios, bauxite and iron ore production are projected to increase significantly as aluminium and steel remain highly important materials with a wide array of applications globally, including technologies and infrastructure (Australian Industry Energy Transitions Initiative [ETI], 2023; CSIRO, 2023). The production of aluminium and steel is highly emissions-intensive, with the bulk of total supply chain emissions incurred downstream from the mine site (Aluminium Association, 2023; ETI, 2023; RMI, 2023).

For this reason, it is important that an increasing share of bauxite and iron ore are directed to low-carbon production processes, as under all 1.5°C scenarios, iron, steel, alumina, and aluminium production must be decarbonised. The importance of this is reinforced by potential cost implications presented by carbon border adjustment mechanisms. The Australian government has indicated that the Guarantee of Origin scheme may be expanded to cover both supply chains, verifying lifecycle emissions intensity for Australian products (Department of Industry, Science and Resources, 2024).

FIGURE 12

Projected annual average demand for minerals up to 2050 under the IEA energy technology perspective scenarios



THE MINING SECTOR IN GLOBAL TAXONOMIES: APPROACHES AND CHALLENGES

To date, the inclusion of mining activities has been limited within national and regional taxonomies, particularly when it comes to understanding what 1.5°C alignment looks like for the sector.

There are ongoing technical discussions taking place in the EU as well as some major mining economies as to how these can or should be incorporated. The Indonesia Taxonomy has broad coverage (bauxite, iron ore, copper, Nickel etc.) with standardised transition criteria of 12.5 per cent emissions reduction against business-as-usual by 2030. There are no green criteria.

Given the essential role of mining in the global transition and its role in the Australian economy, this iteration of the Australian taxonomy proposes green and transition criteria for climate mitigation only. These criteria are aimed at decarbonising mining activities across four minerals.

In developing criteria to meet these objectives, the TAG and TTEG have:

- Focused on minerals considered critical, strategic and/or essential to the transition;
- Considered Scope 3 emissions requirements in some circumstances to limit the downstream emissions from use cases that are not 1.5°C aligned.

B. Methodology

Activity selection

In selecting mining activities and minerals to cover in the first phase of the taxonomy's development, the following factors were considered:

- The sector and activity boundaries informed by the classification of activities according to the ANZSIC codes
- The projected role of minerals in the transition, including their importance for key technologies and infrastructure for the clean energy transition
- The importance of minerals with projected stable and growing demand to the Australian economy
- The Australian government's policy priorities for minerals and metals with reference to the transition, including the Future Made in Australia agenda and the Critical Minerals Strategy.

Accordingly, Table 6 highlights the minerals in scope in this initial phase of the taxonomy's development, noting that future iterations may aim to cover other minerals as priorities are determined by relevant stakeholders. Decarbonisation measures that can be used for other mine sites have also been included in recognition that there is a need to provide options to reduce emissions for a variety of other minerals that have a growing demand profile in a 1.5°C aligned pathway. The technical screening criteria outlines further conditions regarding the eligibility of mine sites.

TABLE 6
Activity selection and classification – Minerals, Mining and Metals sector

	Green	Decarbonisation measures
B1. Lithium ore mining	✓	✓
B2. Nickel ore mining	✓	✓
B3. Copper ore mining	✓	✓
B4. Bauxite mining	✓	✓
B5. Iron ore mining	✓	✓
B6. Generic measures for metals and minerals mining operations		✓

Decarbonisation measures

Throughout the taxonomy and in the mining criteria a set of transition decarbonisation measures has been proposed for activities which have a clear role in a net zero 2050 economy, to facilitate movement towards the green activity threshold.

The measures cover significant levers for debarbonisation or enable major decarbonisation rather than marginal efficiency improvements. They have been gathered from credible sources such as CSIRO, the Climate Change Authority, IEA, Industry ETI and other specialist industry knowledge.

For iron ore, research and development (R&D) has been included as an eligible measure. This is in recognition of the need for R&D to develop green steel production pathways for hematite-goethite iron ore, which comprises the bulk of Australia's production and is not readily compatible with DRI-EAF, the most advanced green steel technology (CSIRO, 2023; ETI, 2023).

The measures are designed to facilitate green CapEx and are appropriate for the issuance of use-of-proceeds debt. They are not able to be utilised in sustainability-linked debt or entity-level reporting of taxonomy-aligned revenues.

Updates from the first public consultation

Feedback was gathered from a range of participants through consultation. Respondents indicated support for the proposed transition measures, and for the inclusion of biofuels as an eligible transition measure provided that accompanying requirements to mitigate environmental trade-offs are included. The majority of respondents also assessed the proposed approach as credible.

Several submissions provided constructive feedback about how the usability of the criteria could be improved by (a) providing further clarity around the emissions boundary to which emissions intensity thresholds apply; and (b) refining downstream requirements for iron ore.

Emissions boundary

The green criteria in the first public consultation proposed a mine site boundary approach, but it was noted that this would be challenging to implement given the heterogeneity across mine sites, depending on the degree of processing included on-site, and distance to power sources and transport hubs, among other variables.

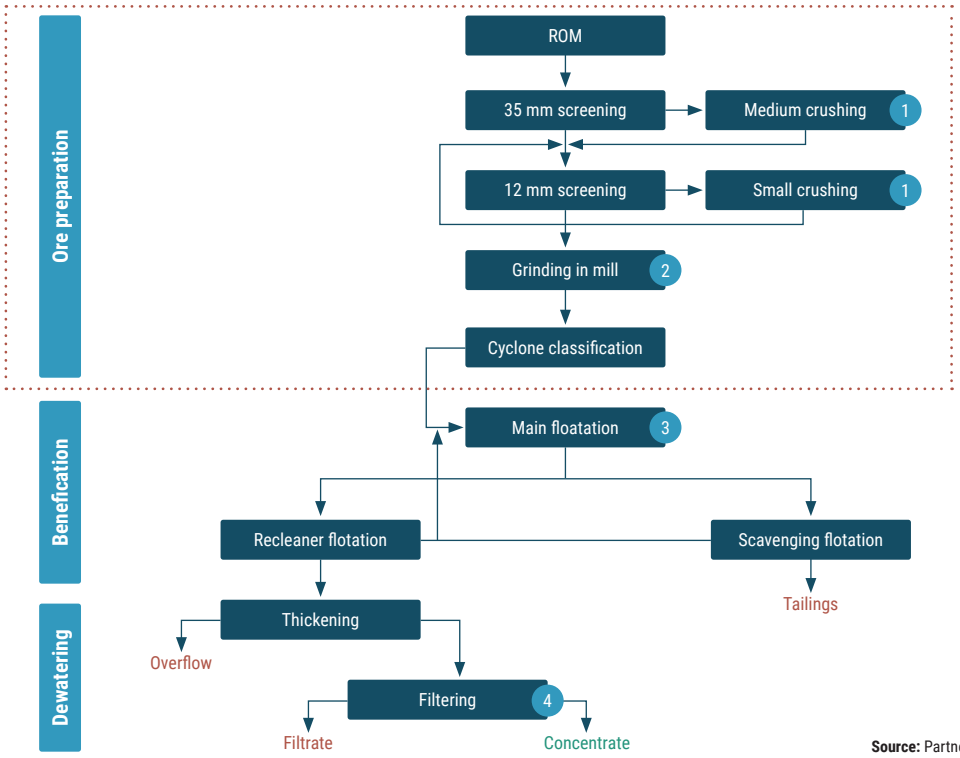
To resolve the boundary challenges, two solutions have been proposed in the criteria that provide flexibility depending on the on-site processing paths and other variables within the mine site.

1. Ore processing boundary thresholds

To ensure that thresholds can be compared across sites, an ore preparation boundary has been applied for the proposed green criteria.

This means that the threshold will be applied to all ore preparation processes on-site (i.e. grinding, milling) but not to any further beneficiation or de-watering processes. Any site boundary that includes those processes may exclude them here for the purposes of calculating emissions.

FIGURE 13
Ore preparation boundary applied to Lithium, Nickel, Copper and Bauxite



Source: Partners in Performance

2. Percentage based improvement

The second option proposed is a percentage-based improvement where the emissions intensity is improved over time according to a percentage threshold.

For this option, there is no need for a clear boundary as the percentage would apply at the mine site or within a mine site.

The use of this option is, however, better suited to sustainability-linked transactions and transition planning generally than to use of proceeds debt.

For this reason, these criteria are applied specified as only applicable to certain use cases. See below for more information.

TABLE 7
Application of green mining sector criteria

Criteria type	Taxonomy-aligned use cases
Numerical declining threshold	✓ Issuing use of proceeds debt ✓ Corporate reporting at the activity or mine site level of aligned revenue, CapEx and OpEx ✓ Transition planning ✓ Sustainability-linked debt
Percentage based improvement	✓ Transition planning ✓ Sustainability-linked debt ✓ Reporting of capex (if CapEx related to % improvement) ✗ Use of proceeds debt ✗ Corporate reporting of revenue

Downstream requirements – iron ore

Some respondents noted that commercial sensitivities, limited Scope 3 data, and limited traceability may impede the ability to meet downstream requirements proposed in the iron ore criteria.

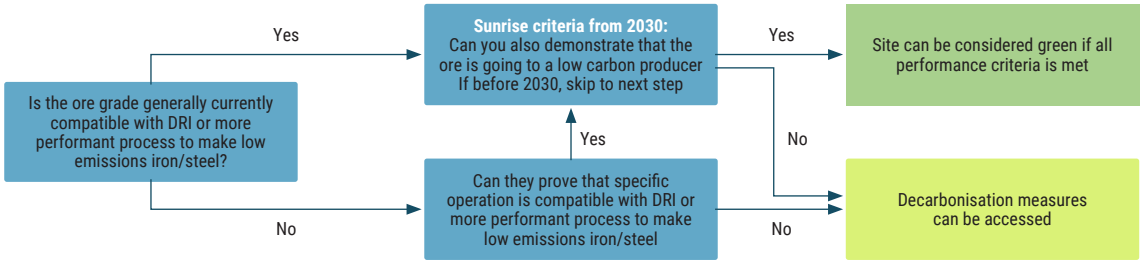
However, given the need under a 1.5°C scenario for increasing shares of iron ore to be directed to low-carbon iron and steelmaking processes, the inclusion of criteria that addresses this dependence remains important. Over half of the respondents in the first public consultation signalled support for retaining a downstream emissions requirement due to the materiality of emissions incurred downstream. The TTEG also supports retaining the inclusion of a downstream emissions requirement.

Three changes have been made:

1. For the iron ore transition criteria (i.e. measures), the Scope 3 transition plan requirement proposed in the first public consultation has been removed to reflect the purpose of transition criteria in the taxonomy, and enable options for all iron ore sites to access taxonomy-aligned finance.
2. For the iron ore green criteria, the criteria have been adapted to focus on the compatibility with low-carbon iron and steel making. Figure 2 summarises the methodology underpinning this criteria.
3. A sunrise date has been applied to the requirement to demonstrate that iron ore is being sent to a low-carbon iron / steel producer, allowing additional time to accommodate ongoing improvements for Scope 3 data and supply chain traceability.

Additionally, due to the downstream emissions materiality in aluminium supply chains, similar requirements have been applied to bauxite.

FIGURE 14
Logic to define downstream criteria for iron ore mining



Reference Pathways

While international pathways are available for diversified miners, there is limited availability of science-based pathways at the mineral level.

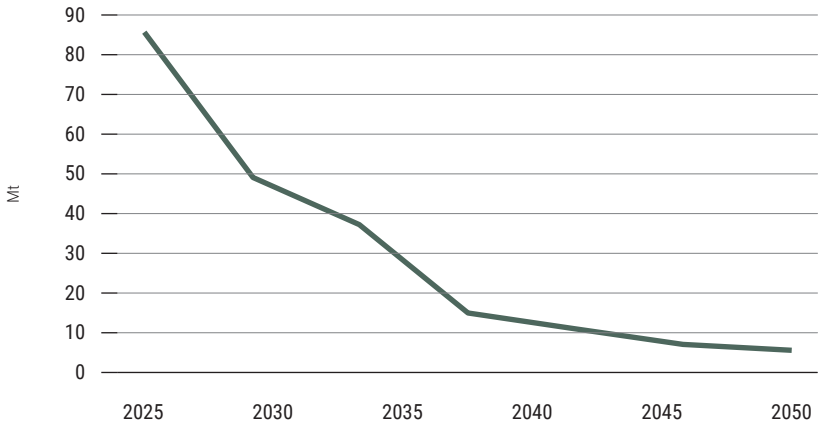
Within Australia, however, there are two sources of 1.5°C aligned pathways – the Australian Industry Energy Transition Initiative 'coordinated action' scenario, and CSIRO's (2023) CRD scenario. Both use similar methodologies and data sources, but the CSIRO pathway has been selected to enable additional flexibility in the short-term relative to the pathway proposed in the first public consultation.

For iron ore, the iron ore emissions intensity pathway from CSIRO's (2023) CRD scenario has been used.

Further detail about how scenarios inform emissions intensity thresholds in the green criteria, and the mining sector methodology, can be found in the first public consultation paper.

FIGURE 15

Absolute emissions reduction curve in the Australian mining sector - CSIRO (2023) CRD scenario



C. Technical Screening Criteria

B1. Lithium Ore Mining

Sector	Minerals, Mining and Metals
Activity	Lithium Ore Mining
Associated ANZSIC codes	0990 Other Non-Metallic Mineral Mining and Quarrying
Objective	Climate change mitigation
	Technical screening criteria

Green

The activity must meet either criteria A, B, or C.

A. The mine site meets both of the following:
   - — *Scope 1 emissions intensity corresponding to the ore processing boundary does not exceed the value below.*
   - — *Electricity emissions purchased or produced on the mine site do not exceed 100gCO2e/kWh*

	t CO2e / t LCE
2025	0.52
2030	0.23
2035	0.09
2040	0.07
2045	0.04
2050	0.03

B. Mine site CO2e emissions intensity (scope 1 + scope 2) does not exceed the value below:

	t CO2e / t LCE
2025	1.091
2030	0.48
2035	0.19
2040	0.14
2045	0.09
2050	0.07

C. The mine site can demonstrate a percentage reduction in emissions intensity of scope 1 and 2 emissions per tonne of product as follows based on a 2019 baseline:

Annual (any time period <5 years)	4.2%
2019 - 2030	56%
2019 - 2035	83%
2019 - 2040	87%
2019 - 2050	94%

Decarbonisation measures

- Electrification of the vehicle fleet
- Energy storage technology
- Low carbon fuel technology – e.g. H2/NH3 (as defined by the taxonomy)
- Trolley assist
- Switching electricity sources (from grid non-renewables and on-site diesel generation to grid and on-site renewables)
- Purchase and use of low carbon liquid fuels as defined in the Manufacturing and Industry criteria in the Australian Taxonomy

Specific ineligible cases

Sites or facilities with captive coal plants

Notes

- Emissions intensity trajectory is consistent with the absolute mining sector emissions reduction pathway in CSIRO's (2023) CRD scenario.
- Percentage-based reduction based on SBTi Absolute Contraction approach (annual) and CSIRO's (2023) CRD scenario for the mining sector.
- Emissions intensity starting points based on 20th percentile highest performing mine sites globally based on data provided by Skarn Associates.

B2. Nickel Ore Mining

Sector	Minerals, Mining and Metals
Activity	Nickel Ore Mining
Associated ANZSIC codes	0806 Nickel Ore Mining
Objective	Climate change mitigation

Technical screening criteria

Green

The activity must meet either criteria A, B, or C.

A. The mine site meets both of the following:
   - *Scope 1 emissions intensity corresponding to the ore processing boundary does not exceed the value below.*
   - *Electricity emissions purchased or produced on the mine site do not exceed 100gCO2e/kWh*

	t CO2e / t nickel equivalent
2025	1.61
2030	0.70
2035	0.28
2040	0.21
2045	0.13
2050	0.10

B. Mine site CO2e emissions intensity (scope 1 + scope 2) does not exceed the value below:

	t CO2e / t nickel equivalent
2025	3.63
2030	1.58
2035	0.62
2040	0.46
2045	0.30
2050	0.23

C. The mine site can demonstrate a percentage reduction in emissions intensity of scope 1 and 2 emissions per tonne of product as follows based on a 2019 baseline:

Annual (any time period <5 years)	4.2%
2019 - 2030	56%
2019 - 2035	83%
2019 - 2040	87%
2019 - 2050	94%

For companies and sites aiming to meet an emission reduction threshold in the future, option C is not eligible for use-of-proceeds debt

Decarbonisation measures

- Electrification of the vehicle fleet
- Energy storage technology
- Low carbon fuel technology – e.g. H2/NH3 (as defined by the taxonomy)
- Trolley assist
- Switching electricity sources (from grid non-renewables and on-site diesel generation to grid and on-site renewables)
- Purchase and use of low carbon liquid fuels as defined in the Manufacturing and Industry criteria in the Australian Taxonomy

Specific ineligible cases

Sites or facilities with captive coal plants

Notes

- Emissions intensity trajectory is consistent with the absolute mining sector emissions reduction pathway in CSIRO's (2023) CRD scenario.
- Percentage-based reduction based on SBTi Absolute Contraction approach (annual) and CSIRO's (2023) CRD scenario for the mining sector.
- Emissions intensity starting points based on 20th percentile highest performing mine sites globally based on data provided by Skarn Associates.

B3. Copper Ore Mining

Sector	Minerals, Mining and Metals
Activity	Copper Ore Mining
Associated ANZSIC codes	0803 Copper Ore Mining
Objective	Climate change mitigation

Technical screening criteria

Green

The activity must meet either criteria A, B, or C.

A. The mine site meets both of the following:
   - — *Scope 1 emissions intensity corresponding to the ore processing boundary does not exceed the value below.*
   - — *Electricity emissions purchased or produced on the mine site do not exceed 100gCO2e/kWh*

	t CO2e / t copper
2025	0.58
2030	0.25
2035	0.1
2040	0.07
2045	0.05
2050	0.04

B. Mine site CO2e emissions intensity (scope 1 + scope 2) does not exceed the value below:

	t CO2e / t copper
2025	0.98
2030	0.43
2035	0.17
2040	0.13
2045	0.08
2050	0.06

C. The mine site can demonstrate a percentage reduction in emissions intensity of scope 1 and 2 emissions per tonne of product as follows based on a 2019 baseline:

Annual (any time period <5 years)	4.2%
2019 - 2030	56%
2019 - 2035	83%
2019 - 2040	87%
2019 - 2050	94%

For companies and sites aiming to meet an emission reduction threshold in the future, option C is not eligible for use-of-proceeds debt.

Decarbonisation measures

- Electrification of the vehicle fleet
- Energy storage technology
- Low carbon fuel technology – e.g. H2/NH3 (as defined by the taxonomy)
- Trolley assist
- Switching electricity sources (from grid non-renewables and on-site diesel generation to grid and on-site renewables)
- Purchase and use of low carbon liquid fuels as defined in the Manufacturing and Industry criteria in the Australian Taxonomy

Specific ineligible cases

Sites or facilities with captive coal plants

Notes

- Emissions intensity trajectory is consistent with the absolute mining sector emissions reduction pathway in CSIRO's (2023) CRD scenario.
- Percentage-based reduction based on SBTi Absolute Contraction approach (annual) and CSIRO's (2023) CRD scenario for the mining sector.
- Emissions intensity starting points based on 20th percentile highest performing mine sites globally based on data provided by Skarn Associates.

B4. Bauxite Mining

Sector	Minerals, Mining and Metals
Activity	Bauxite Mining
Associated ANZSIC codes	0802 Bauxite Mining
Objective	Climate change mitigation

Technical screening criteria

Green

The activity must comply with either A or B. All activities must comply with C from 1 January 2030.

A. Mine site CO2e emissions intensity (scope 1 + scope 2) corresponding to the ore processing boundary does not exceed the value below.

	t CO2e / t bauxite
2025	0.077
2030	0.034
2035	0.025
2040	0.013
2050	0.002

B. The mine site can demonstrate a percentage reduction in emissions intensity of scope 1 and 2 emissions per tonne of product as follows based on a 2019 baseline:

Annual (any time period <5 years)	4.2%
2019 - 2030	56%
2019 - 2035	83%
2019 - 2040	87%
2019 - 2050	94%

C. After 2030: Activities which meet either of the criteria above must also demonstrate (via offtake agreements or other means) that the bauxite is being used to produce low-carbon aluminium.

Decarbonisation measures

- Electrification of the vehicle fleet
- Energy storage technology
- Low carbon fuel technology – e.g. H2/NH3 (as defined by the taxonomy)
- Trolley assist
- Switching electricity sources (from grid non-renewables and on-site diesel generation to grid and on-site renewables)
- Purchase and use of low carbon liquid fuels as defined in the Manufacturing and Industry criteria in the Australian Taxonomy

Specific ineligible cases

Sites or facilities with captive coal plants

Notes

- Emissions intensity starting point and trajectory based on CSIRO's (2023) CRD bauxite emissions intensity pathway.
- Percentage-based reduction based on SBTi Absolute Contraction approach.

B5. Iron Ore Mining

While it is not designated as a critical mineral, iron ore is vital mineral for the Australian economy and an essential component in modern technologies and infrastructure, including those needed for the clean energy transition for example, wind turbines and green buildings. It has been included in the taxonomy for these reasons, along with its direct emissions share, and role in high-emissions supply chains. As the Australian government develops the Guarantee of Origin scheme for green metals, including iron and steel, the impetus to decarbonise iron ore mining will continue to grow.

The major challenge in designing 1.5 degree aligned criteria for iron ore is that emissions from mining are relatively minor compared to emissions from iron and steel making. The iron and steel making process accounts for over 90 percent of emissions in the value chain[1].

For this reason, the TTEG determined that the demonstration of alignment with a 1.5°C trajectory must account for this disproportionate emissions materiality, particularly as the contribution of iron ore supply, in zero-carbon technologies is, on aggregate, less direct relative to the critical minerals covered in this sector.

The criteria defined therefore are designed link to key downstream parts of the value chain where the bulk of emissions are generated. Given the challenges of meeting these criteria in the short term, some criteria are only applicable after 2030.

Sector	Minerals, Mining and Metals
Activity	Iron Ore Mining
Associated ANZSIC codes	0801 Iron Ore Mining
Objective	Climate change mitigation
	Technical screening criteria
Green	The activity must comply with either A or B. All activities must comply with C from 1 January 2030. A. The activity complies with one of the following: — *The ore grade is generally and currently compatible with DRI or more performant processes to make low emissions iron / steel, or;* — *The ore grade is not generally compatible with DRI or more performant processes to make low emissions iron / steel but the specific site / operation / project is currently compatible with DRI or more performant processes to make low emissions iron / steel.* B. Mine site CO2e emissions intensity (scope 1 + scope 2) does not exceed the value below **t CO2e / t iron ore** 2025: 0.013 2030: 0.005 2035: 0.003 2040: 0.002 2050: 0 C. After 2030: Activities which meet either of the criteria above must also demonstrate (via offtake agreements or other means) that the ore is going to DRI or a more performant process to make low emissions iron and/or steel.
Decarbonisation measures	• R&D into enabling hematite ores into DRI and other low carbon steel processes • Electrification of the vehicle fleet • Energy storage technology • Low carbon fuel technology – e.g. H2/NH3 (as defined by the taxonomy) • Trolley assist • Switching electricity sources (from grid non-renewables and on-site diesel generation to grid and on-site renewables) • Purchase and use of low carbon liquid fuels as defined in the Manufacturing and Industry criteria in the Australian Taxonomy
Specific ineligible cases	Sites or facilities with captive coal plants
Notes	• Emissions intensity starting point and trajectory based on CSIRO's (2023) CRD iron ore emissions intensity pathway.

B6. Generic Measures for the Mining Sector

The following decarbonisation measures can be applied across any mine site and mineral types other than the exceptions listed below.

The measures are primarily CapEx investments that could be used to issue a labelled bond. They do not, however, allow a whole activity or mine site to be labelled as green or have a green label.

Sector	Minerals, Mining and Metals
Activity	Implementation of Mine Site Decarbonisation Measures
Associated ANZSIC codes	1090 Other Mining Support Services
Objective	Climate change mitigation
	Technical screening criteria
Decarbonisation measures	• Electrification of the vehicle fleet • Energy storage technology • Low carbon fuel technology – e.g. H2/NH3 (as defined by the taxonomy) • Trolley assist • Switching electricity sources (from grid non-renewables and on-site diesel generation to grid and on-site renewables) • Purchase and use of low carbon liquid fuels as defined in the Manufacturing and Industry criteria in the Australian Taxonomy
Specific ineligible cases	Mining of coal Extraction of fossil fuels

FOR CONSULTATION

7. Are the proposed TSC credible? In this context, credibility of criteria refers to whether a transparent scientific approach aligned to the Paris Agreement temperature goal was used, informed by the latest technological understanding.

8. Are the proposed TSC usable? In this context, usability of criteria refers to whether they are comparable, clear, objective and easy to understand. If not, please explain how they could be improved.

9. Is the ore processing boundary usable for emissions intensity thresholds?

10. Does the percentage reduction field provide a usable and useful alternative to accommodate for varying boundaries comprising mine sites?

11. Is there an alternative approach that has not been considered for demonstrating alignment for the green criteria? Please provide evidence to justify recommendation

12. Do the revised downstream criteria adequately balance and enhance usability and credibility? Please provide evidence if suggesting an alternative approach

13. Please provide any further feedback on specific activities here and provide evidence to support any recommendations.

7. For Consultation: Manufacturing and Industry

A. Sector Context

Globally, the industry sector account for approximately a quarter of emissions globally, having risen 70 percent since 2000 due to increasing demand for industrial goods. The cement, steel, aluminium and chemicals sectors constitute the major industrial emissions sources, and their demand is expected to continue to rise.

In contrast to other sectors, the ability to reduce emissions from such activities through their phasing out use or substitution is relatively limited: according to the IEA's (2023a) NZE2050 pathway, demand is projected to stay consistent or grow, and there are currently few scalable low-carbon alternatives due to technological and economic barriers.

Industrial emissions will need to fall to by approximately 25 percent by 2030 or 3 percent per annum on average according to the IEA's NZE2050 scenario. Under CSIRO's CRD scenario, emissions from alumina, aluminium, cement and steel decline by over 85 percent by 2050 on 2020 levels, while demand for these products remains stable and, in the case of cement, grows significantly. This underscores the need to decouple production volume growth from emissions growth.

The industry sector makes up approximately 8 percent of Australia's emissions which, while lower in percentage terms compared to the global average, is still large in given its relatively small output (DCCEEW, 2022). The highest emitting industrial sectors are iron and steel, cement, and alumina production which account for 50 percent of the sector's emissions (CCA, 2024b). Under CSIRO's (2023) CRD scenario, for example, cement production is expected to increase by 27 percent by 2050.

At the time of writing, the Australian government is in the final stages of developing an Industry Sector Plan for Australia which will articulate key emissions reduction priorities.

The plan will also articulate associated economic imperatives, in recognition of the growing demand-side opportunities associated with low-carbon industrial sectors. This follows a global reorientation toward low-carbon industrial development driven through the Inflation Reduction Act, and the EU Green Deal Industrial Plan, among other initiatives.

The Future Made in Australia (FMIA) Act constitutes a key pillar of Australia's drive to realise low-carbon competitive advantages relevant to the transition. Priority industries under the FMIA's National Interest Framework include the manufacture of low-carbon hydrogen, low-carbon iron, steel, alumina and aluminium, low carbon liquid fuels, and clean energy technologies (Parliament of Australia, 2024).

Seizing an increased share of downstream processing and refining capacity for critical minerals has also been identified as a significant economic opportunity for Australia in context of the transition (CSIRO, 2024).

B. Methodology

Activity selection and classification

Activity selection and the development of criteria has drawn from the FMIA priorities, Australia's emissions accounts, and research and pathways developed by CSIRO, Climateworks Centre, the Climate Change Authority and the Industry Energy Transitions Initiative. Where aligned with the core taxonomy principles, industry standards, incentive schemes and regulations have been referenced to ensure local compatibility and usability.

The proposed scope and classification of Manufacturing and Industry sector activities is as follows:

TABLE 8
Activity selection and classification - Manufacturing and Industry sector

	Classification	
	Green	Decarbonisation measures
C1. Lithium, nickel and copper refining	✓	✓
C2. Alumina production	✓	✓
C3. Aluminium smelting	✓	✓
C4. Manufacture of hydrogen	✓	✓
C5. Manufacture of cement	✓	✓
C6. Manufacture of iron and steel	✓	✓
C7. Manufacture of nitric acid	✓	✓
C8. Manufacture of ammonia	✓	✓
C9. Manufacture of low-carbon liquid fuels	✓	✓
C10. Manufacture of biogas	✓	✓
C11. Energy efficiency for industrial facilities		✓
C12. Manufacture of renewable energy technologies	✓	
C13. Manufacture of equipment for the hydrogen production through electrolysis	✓	
C14. Manufacture of low-carbon technologies for transport	✓	
C15. Manufacture of energy efficiency equipment for buildings	✓	
C16. Manufacture and recycling of batteries	✓	
C17. Manufacture of plastics in primary form through recycling	✓	

Types of criteria in the Manufacturing and Industry sector

In general terms, the manufacturing criteria are divided into three components:

1. Technical thresholds
2. Cross-cutting criteria
3. Decarbonisation measures

Technical thresholds are, where the data is available, determined using credible sector pathways formulated either by CSIRO, the Australian Industry ETI, or Climateworks Centre.

Thresholds have been put forward using 5-10 year steps that intersect with the pathway. All thresholds are proposed on an emissions intensity basis to account for a wide range of different types and sizes of facilities.

The stepped approach was recommended by industry groups and experts to provide stability to the thresholds over a period of time as well as a more realistic reflection of how emissions reductions can be achieved with large investments/upgrades at various points in time rather than incremental steps each year.

In some cases, pathways are available only on an absolute emissions basis. In these cases, data representing best performance in 2025 was used as a starting point and the slope of the absolute emissions reduction curve used to determine future thresholds.

In all cases future thresholds, particularly those beyond 2035 should be seen as indicative in nature. They are put forward here to give users visibility on how the thresholds will ratchet down over time. However, the taxonomy will also be updated over time and these future thresholds may be adjusted to account for changes in technology, pathways and underlying science.

Cross-cutting criteria refer to requirements concerning the sustainability of feedstocks, fuels or other inputs that are linked to criteria in other parts of the taxonomy – e.g. steel that utilises low-carbon hydrogen in the iron making process. In these cases, the relevant taxonomy reference is inserted.

Decarbonisation measures are directly eligible CapEx investments that will support the decarbonisation of the activity. These measures are broadly in line with the key decarbonisation levers identified by the Climate Change Authority (2024b), which include electrification, fuel substitution, recycling, energy efficiency, and utilisation of waste as feedstocks in the production of gaseous and liquid biofuels.

C. Technical Screening Criteria

C1. Refining of Copper, Lithium and Nickel

Primary smelting or refining of copper or the recovery of copper from waste or scrap. This class also includes by-production of sulphuric acid in conjunction with the smelting of these metals.

Primary smelting, secondary smelting and refining of Nickel or recovery from drosses, ashes, scrap or other waste material. The metal is cast into ingots or other basic shapes.

<table>
<tr><td>Sector</td><td>Manufacturing and Industry</td></tr>
<tr><td>Activity</td><td>Refining of Lithium, Copper and Nickel</td></tr>
<tr><td>Associated ANZSIC codes</td><td>2133 Copper, Silver, Lead and Zinc Smelting and Refining
2139 Other Basic Non-Ferrous Metal Manufacturing</td></tr>
<tr><td>Objective</td><td>Climate change mitigation</td></tr>
<tr><td></td><td></td></tr>
<tr><td></td><td>Technical screening criteria</td></tr>
<tr><td>Green</td><td>The activity must comply with one of the following:
A. The activity can demonstrate a percentage reduction in emissions intensity as follows based on a 2019 baseline:
<u>Percentage of emissions reduction for refining of Lithium, Copper and Nickel</u>
<table>
<tr><th></th><th>Copper</th><th>Lithium</th><th>Nickel</th></tr>
<tr><td>Annual</td><td>4.2%</td><td>4.2%</td><td>4.2%</td></tr>
<tr><td>2019 - 2030</td><td>30%</td><td>30%</td><td>30%</td></tr>
<tr><td>2019 - 2040</td><td>70%</td><td>70%</td><td>70%</td></tr>
<tr><td>2019 - 2050</td><td>95%</td><td>90%</td><td>90%</td></tr>
</table>
B. The emissions intensity of refining and smelting do not exceed the value below
<table>
<tr><th></th><th>Copper (tCO2e/tCu)</th><th>Lithium (t CO2e/t LCE)</th><th>Nickel Sulphide (CO2e/t Ni equiv)</th></tr>
<tr><td>2025</td><td>1.64</td><td>10.7</td><td>3.97</td></tr>
<tr><td>2030</td><td>1.15</td><td>7.5</td><td>2.78</td></tr>
<tr><td>2040</td><td>0.5</td><td>2.6</td><td>0.99</td></tr>
<tr><td>2050</td><td>0.08</td><td>1.07</td><td>0.4</td></tr>
</table>
C. Production of secondary Copper, Nickel or Lithium</td></tr>
<tr><td>Decarbonisation measures</td><td>• Fuel switching from fossil to non-fossil alternatives
• Process upgrades that reduce emissions by >15%
• Replacement of carbothermal reduction processes with alternatives (e.g. hydrogen and electrolytic reduction)
• R&D into low carbon processes
• Integration of renewable energy
• Energy recovery systems
• Replacement of conventional carbon-based anodes with novel anodes or from renewable sources of carbon
• Switching to non-fossil feedstocks</td></tr>
<tr><td>Specific ineligible cases</td><td>Refining of laterite ores to produce Nickel Pig Iron</td></tr>
<tr><td>Notes</td><td>• Emissions intensity figures sourced from Skarn Associates.
• Percentage-based reductions based on SBTi's Absolute contraction approach.
• Additional inputs informed by the International Copper Association (2023) Global Decarbonisation Scenario, and World Bank (2023) Net Zero Roadmap for Copper & Nickel value chains</td></tr>
</table>

C2. Alumina Production

Refining of bauxite to form alumina (aluminium oxide).

Sector	Manufacturing and Industry
Activity	Alumina Production
Associated ANZSIC codes	2131 Alumina Production
Objective	Climate change mitigation
	Technical screening criteria
Green	The activity must comply with criteria A and B: A. GHG emissions do not exceed the following carbon intensity thresholds (t CO2-eq/t aluminium) **2020** 1.63 / **2025** 1.52 / **2030** 1.29 / **2040** 0.89 / **2050** 0.29 B. GHG emissions calculations should include scope 2 emissions from electricity use
Decarbonisation measures	• Fuel switching from fossil to non-fossil alternatives • Process upgrades to reduce emissions by >15% • R&D dedicated to the substantial reduction, avoidance or removal of GHG emissions from alumina production • Electric digestion for alumina refining (electric boilers or mechanical vapour recompression) • Electric or hydrogen calcination • Mechanical vapour recompression electrification • Fuel switch: Hydrogen fuel in calcination • Boiler electrification • Boiler hydrogen substitution / conversion • Boiler conversion for biomass substitution
Notes	The emissions intensity trajectory is based on CSIRO's (2023) CRD pathway for alumina production.

C3. Aluminium Smelting

Smelting of alumina to produce aluminium, or recovering aluminium from scrap.

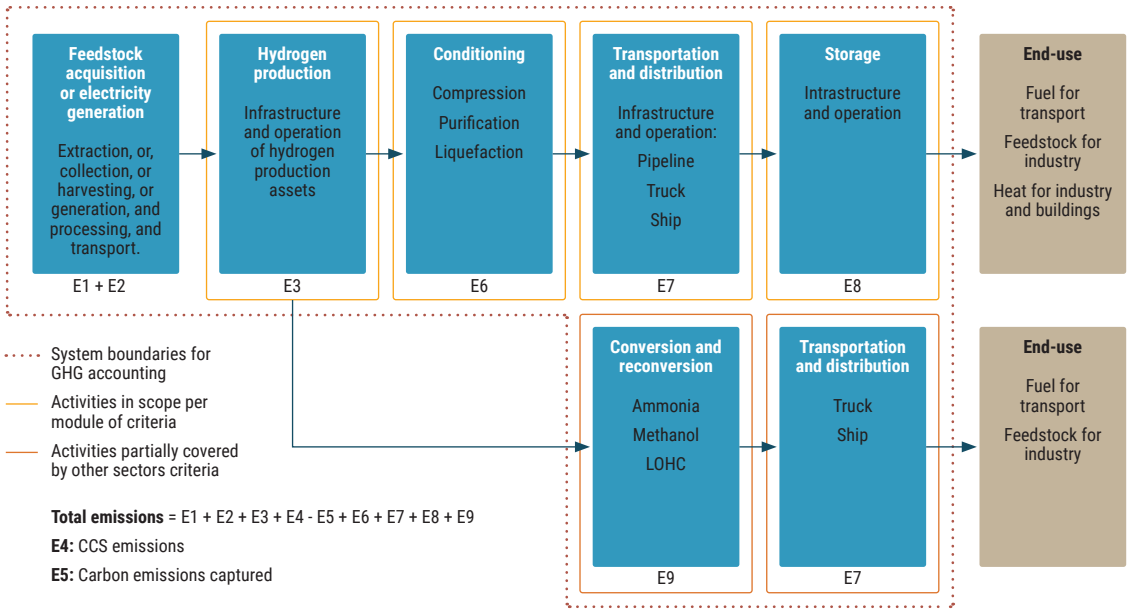
Sector	Manufacturing and Industry
Activity	Aluminium Smelting
Associated ANZSIC codes	2132 Aluminium Smelting
Objective	Climate change mitigation
	Technical screening criteria
Green	**Primary aluminium production:** The activity must comply with one of the following: A. Emissions intensity: — *GHG emissions do not exceed the carbon intensity thresholds in the table below.* **2025** 7.17 / **2030** 3.10 / **2040** 1.29 / **2050** 0.32 — *GHG emissions calculations should include Scope 2 emissions from electricity use* B. Electricity consumption < 15.5MWh/t **Secondary aluminium:** No criteria – automatically eligible
Decarbonisation measures	• Inert anodes for aluminium • New cell design for aluminium
Sources	The emissions intensity trajectory is based on CSIRO's (2023) CRD pathway for aluminium smelting.

C4. Manufacture of Hydrogen

The diagram below is a simplified representation of the hydrogen value chain. The dotted line represents the system boundaries for the GHG accounting. Total GHG emissions must include emissions from feedstock acquisition, hydrogen production, conditioning, transportation, conversion, and reconversion modules.

FIGURE 16

System boundary for Hydrogen production (Climate Bonds Initiative, 2022)



Sector	Manufacturing and Industry
Activity	Manufacture of Hydrogen
Associated ANZSIC codes	1811 Industrial Gas Manufacturing
Objective	Climate change mitigation
	Technical screening criteria
Green	The activity must comply with all of the following: A. Emissions intensity: — *The activity complies with lifecycle emissions that are equal to or lower than carbon intensity thresholds in the table below.* — *Life cycle assessment is carried out using a cradle-to-site system boundaries to demonstrate compliance with the emissions intensity thresholds. Methodological notes can be found in Appendix 3.1)* B. Feedstock: — *The feedstock is not coal, coal derivatives, or biomass other than from waste* C. For activity with CCU / CCS only: — *Meet the relevant cross cutting criteria in Appendix 3.2. Energy emissions related to CCS must be included in the GHG accounting.* *Hydrogen emissions intensity thresholds*
Decarbonisation measures	Purchase/installation of electrolysers Installation of renewable electricity Renewable energy Power Purchase Agreements
Specific ineligible cases	Production of hydrogen where: The feedstock is coal or coal derivatives and/or • Facilities with captive coal plants • The energy source is biomass from primary sources and/or wood and other dedicated crops.
Notes	Hydrogen emissions intensity thresholds based on those used by the European Commission (2021) and Climate Bonds Initiative (2023).

Thresholds (kg CO2 / kg product)			
2025	**2030**	**2040**	**2050**
3.0	1.5	0.6	0.0

C5. Manufacture of Cement

Manufacturing of portland, natural and other hydraulic cement from crushed limestone and clay/shale. Also included are units mainly engaged in manufacturing lime and lime products from calcareous materials.

Sector	Manufacturing and Industry
Activity	Manufacture of Cement
Associated ANZSIC codes	2031 Cement and Lime Manufacturing
Objective	Climate change mitigation
	Technical screening criteria
Green	The activity must comply with all of the following: A. Emissions: *The activity complies with emissions lower than carbon intensity thresholds in the table below after applying a correction factor according to the cement class/grade (See Table with correction factors below). The system boundaries and GHG accounting methodological notes for applying the correction factor can be found in Appendix 3.3.* B. Fuel source: — *Hydrogen: The hydrogen used meets the Taxonomy criteria for hydrogen production.* — *Biomass: When using biomass, the raw material used is derived from existing supply chains and does not require dedicated production out of arable land. Only waste and residues are eligible. Wood and other dedicated crops are not eligible.* — *Waste-derived fuels, including Municipal Solid Waste (MSW) must meet Taxonomy criteria and both of the following:* ○ *All waste of recycling potential must be removed prior to burning in line with the waste hierarchy and* ○ *Municipal solid waste will not be eligible as a fuel type after 2035* C. If the activity uses Carbon Capture and Storage (CCS) on site, it must comply with requirements set out in Appendix 3.4. Energy emissions related to CCS must be included in the GHG accounting. *Cement emissions intensity thresholds* **Thresholds (kg CO2 / kg cementitious product)** 2025 2030 2040 2050 0.42 0.36 0.18 0 *Correction factor applied to emission intensity based on class of cement* **Cement class** / **Correction factor** 32.5 — 1.18 42.5 — 1.00 52.5 — 0.87
Decarbonisation measures	• Heat recovery systems • Digitised control equipment or infrastructure. (Sensors and measurement tools, advanced software, etc) • Supplementary Cementitious Materials (SCM) use in cement production • Testing equipment (Automated XRD systems) • Electrification of heat • Measures which achieve emissions savings equivalent to the emissions decrease for facilities over the tenor of the debt instrument • Installation of CCS or CCU • Purchase and use of hydrogen as a fuel
Specific ineligible cases	Production facilities or measures where: The energy source is coal or coal derivatives or dedicated crops, primary organic streams, and/or wood. Municipal solid waste is not eligible as a fuel source after 2035
Notes	• Cementitious product" means clinker, cement and cement substitutes produced by the reporting company. The full definition for t CO2 / t cementitious product shall be according to the Cement CO2 Protocol v3.0 (2011) • Thresholds based on emissions intensity thresholds and guidance by the European Commission (2021) and Science-Based Targets Initiative (2023). • Biomass requirements based on the Climate Bonds Bioenergy Criteria. Section 3.2.2. Requirement 2: Reducing the risk of indirect land use impact.

C6. Manufacture of Iron and Steel

Smelting and/or refining of iron ore or iron sands into basic iron products such as ingots, billets and slabs. Also included are units mainly engaged in manufacturing steel from iron alloyed with other elements (e.g. with carbon to produce carbon steel; with chromium to produce stainless steel); the conversion of basic iron and steel products (generally by hot or cold rolling) into primary shapes such as sheets, bars and rods; and recycling scrap ferrous metals.

Sector	Manufacturing and Industry
Activity	Manufacture of Iron and Steel
Associated ANZSIC codes	2110 Iron Smelting and Steel Manufacturing
Objective	Climate change mitigation
	Technical screening criteria
Green	The activity must comply with all of the following: A. Emission intensity is less than or equal to the thresholds defined in the table below. The system boundaries and GHG accounting methodological notes can be found in Appendix 3.5. B. Cross-cutting criteria detailed in Appendix 3.6.
Decarbonisation measures	• Replacement of Blast furnace with DRI production • Optimization of Electric Arc Furnace (EAF), installation and operation of other mitigation measures associated with EAF facilities • R&D/prototype testing for low carbon steel production processes including but not limited to electric smelting furnaces • R&D into processes that enable the input of hematite ores into low carbon steel production processes.
Specific ineligible cases	Construction / planning / design of new unabated blast furnaces after 2025
Notes	Emissions intensity pathways based on CSIRO's (2023) CRD scenario, and other inputs informed by IEA data and analysis by the World Economic Forum (2023).

Steel emissions intensity thresholds (t CO2e / t steel)

	2025	2030	2040	2050
Primary steel	1.67	1.55	1.39	0.89
Secondary steel	0.67	0.23	0.12	0

C7. Manufacture of Nitric Acid

Sector	Manufacturing and Industry
Activity	Manufacture of Nitric Acid
Associated ANZSIC codes	1813 Basic Inorganic Chemical Manufacturing
Objective	Climate change mitigation
	Technical screening criteria
Green	The activity must comply with all of the following: A. GHG emission intensity is less than or equal to the thresholds defined in the table below. The GHG accounting methodological notes can be found in Appendix 3.7. B. Feedstock requirements included in Appendix 3.7 depending on the feedstock and energy source. C. If the activity uses Carbon Capture and Storage (CCS) on site, it must comply with requirements in Appendix 3.7. Energy emissions related to CCS must be included in the GHG accounting.
Decarbonisation measures	— *Installation and retrofit to include CCS or CCU* — *Substitution of fossil feedstocks with biogas* — *Primary, secondary, and tertiary abatement technologies to reduce N2O emissions that would otherwise have been vented to the atmosphere. N2O monitoring systems must be in place.*
Specific ineligible cases	Production of nitric acid where: • The energy source is coal or coal derivatives or dedicated crops, primary organic streams, and wood. • The feedstock is coal or coal derivatives
Source	University of Technology Sydney (2022)

Thresholds (kg CO2e / kg product)

2025	2030	2040	2050
0.038	0.021	0.011	0.007

C8. Manufacture of Ammonia

Sector	Manufacturing and Industry
Activity	Manufacture of Ammonia
Associated ANZSIC codes	181 Basic Chemical Manufacturing 1831 Fertiliser Manufacturing 1811 Ammonia Gas Manufacturing
Objective	Climate change mitigation
	Technical screening criteria
Green	The activity must comply with one of the following criteria: A. Ammonia is produced from hydrogen, as feedstock, that complies with the Taxonomy criteria for the manufacture of hydrogen; B. Ammonia is recovered from wastewater.
Decarbonisation measures	Feedstock substitution using biogas Electric heat generation
Specific ineligible cases	Production of ammonia where: • The energy source is coal or coal derivatives or dedicated crops, primary organic streams, and wood. • The feedstock is coal or coal derivatives.

C9. Manufacture of Low Carbon Liquid Fuels

Manufacturing of liquid fuels of renewable origin

Sector	Manufacturing and Industry
Activity	Manufacture of Low Carbon Liquid Fuels
Associated ANZSIC codes	1701 Aviation Fuel Manufacturing
Objective	Climate change mitigation
	Technical screening criteria
Green	The activity must comply with all of the following: A. Emissions reduction based on a lifecycle assessment for: — **Renewable diesel** *production achieves at least 65% emissions reduction from the fossil fuel baselines.* — **Sustainable Aviation Fuel** *production achieves at least 60% emissions reduction from the fossil fuel baselines.* — **Hydrogen-derived fuel** *(including ammonia) production achieves at least 70% emissions reduction from the fossil fuel baselines.* B. The above fuels are produced from any of the following feedstocks: — *Agricultural residues and by-products (palm fatty acid distillate, cooking oil residues)* — *Algae* — *Sustainable biomass (See Appendix 3.8 for requirements)* — *Circular CO2 and electricity* — *Hydrogen that meets the requirements in the Activity C4 of the Australian Taxonomy.* C. After 2030: — *Electricity is sourced from renewable sources* — *Carbon is from the atmosphere or industrial processes.*
Decarbonisation measures	• Investment in supply of eligible feedstock • Renewable energy generation PPA • Sourcing / purchasing of renewable energy
Specific ineligible cases	• **Food, energy and feed crops** as a feedstock (Land use competition). • **Animal waste and fat** (It can deprive other sectors, which could switch to damaging alternatives like virgin palm oil. The shift can undermine the climate benefits of using animal fats biofuels. • **Polymers and plastics** waste (these should be used for long lasting/durable materials)
Notes	Based on guidance by the European Commission (2020) and World Economic Forum (2020)

C10. Manufacture of Biogas

Manufacture of biogas including upgrading to biomethane

Sector	Manufacturing and Industry
Activity	Manufacture of Biogas Including Upgrading to Biomethane
Associated ANZSIC codes	1811 Industrial Gas Manufacturing
Objective	Climate change mitigation
	Technical screening criteria
Green	The activity must comply with all of the following: A. Biogas is produced from any of the following feedstocks: — *Commercial and municipal food waste,* — *manure,* — *agricultural waste including organic effluent,* — *sewage sludge* B. Demonstrated MRV (monitoring, reporting and verification) mechanisms, and mitigation measures for methane leakages. C. After 2030, Uses only electricity produced from renewable sources: by implementing one of the following alternatives: — *Renewable-based captive power generation* — *Renewable-based power purchase agreement*
Decarbonisation measures	• Investment in supply of eligible feedstock • Leak detection systems • Renewable energy generation
Specific ineligible cases	Excluded feedstocks: • Food and feed crops • Energy crops

C11. Energy Efficiency for Industrial Facilities

Cross cutting measures are intended for use by any industry sector (not only those listed in this taxonomy) unless specifically excluded. The measures are usable for tagging of CapEx and OpEx, or issuing green bonds, but do not allow the whole activity to be labelled as green.

Sector	Manufacturing and Industry
Activity	Installation and Operation of Energy Efficiency Measures for Industrial Facilities
Associated ANZSIC codes	N/A
Objective	Climate change mitigation
	Technical screening criteria
Decarbonisation measures	The following measures are eligible: • Installation of energy management systems - certified to the ISO 50001 standard. Implementation of a recognised energy management system. • Installation of efficient electric technologies for steam, hot water and process heating, including heat pumps and electro-boilers. Implementation of advanced data collection and analytics, including the installation of metering and monitoring systems and installation of smart controls. • Installation of electric motors - motor efficiency must meet European standards (IE2 – IE5). • Installation of smart electronic actuators • Implementation of variable speed drives to improve energy efficiency of pumps, fans, conveyor and compressor systems. • Installation of industrial thermal battery systems such as water-based thermal batteries. • Waste heat recovery and use technologies and upgrades. • Upgrade or redesign of compressed air systems to convert pneumatic actuators to smart electric actuators, and the replacement of compressed air vacuum with electric vacuum pumps. • Electrification of conveyors
Specific ineligible cases	These measures are not eligible for fossil fuel production facilities.

Enabling Activities

The following activities are classified as enabling activities within the manufacturing sectors in that they enable the decarbonisation of other activities.

Some activities have been designated as directly eligible in the short term or have very minimal criteria. This means that their enabling role is sufficient to demonstrate substantial criteria and do not need any further criteria. This is also in recognition of the fact that none of these manufacturing activities are a major contribution to absolute emissions globally.

In the medium to long term, the manufacturing of all manufacturing activities will need to be decarbonised. Therefore these are only directly eligible until 2030. When the taxonomy is updated, additional substantial contribution criteria will be considered and developed for these activities to be eligible after 2030.

C12. Manufacture of Renewable Energy Technologies

Manufacture of renewable energy technologies.

Sector	Manufacturing and Industry
Activity	Manufacture of Renewable Energy Technologies
Associated ANZSIC codes	2439 Solar Panel Manufacturing, Solar Cell Manufacturing 2499 Other Machinery and Equipment Manufacturing
Objective	Climate change mitigation
	Technical screening criteria
Green	Until 2030: the economic activity manufactures renewable energy technologies that are aligned with the renewable energy generation defined criteria in this Taxonomy.

C13. Manufacture of Equipment for the Production of Hydrogen Through Electrolysis

Sector	Manufacturing and Industry
Activity	Manufacture of Equipment for the Production of Hydrogen Through Electrolysis
Associated ANZSIC codes	2499 Other Machinery and Equipment Manufacturing
Objective	Climate change mitigation
	Technical screening criteria
Green	Until 2030: The economic activity manufactures equipment for the production of hydrogen via electrolysis.

C14. Manufacture of Low-carbon Technologies for Transport

Sector	Manufacturing and Industry
Activity	Manufacture of Low-carbon Technologies for Transport
Associated ANZSIC codes	2311 Hydrogen, fuelcell, hybrid or electric vehicle manufacturing
Objective	Climate change mitigation
	Technical screening criteria
Green	The economic activity manufactures, repairs, maintains, retrofits, repurposes or upgrades any one of the following: A. trains, passenger coaches and wagons that have zero direct (tailpipe) CO2 emissions; B. trains, passenger coaches and wagons that have zero direct tailpipe CO2 emission when operated on a track with necessary infrastructure, and use a conventional engine where such infrastructure is not available C. Road passenger transport vehicles that align with the criteria defined in the Transport section of this Taxonomy D. personal mobility devices that align with the criteria defined in the Transport section of this Taxonomy
Source	European Commission (2020)

C15. Manufacture of Energy Efficiency Equipment for Buildings

Sector	Manufacturing and Industry
Activity	Manufacture of Energy Efficiency Equipment for Buildings
Associated ANZSIC codes	2499 Other Machinery and Equipment Manufacturing
Objective	Climate change mitigation
	Technical screening criteria
Green	Any of the following products and their key components are manufactured, imported or distributed: • heat pumps and compressors and air conditioning systems not using HFC refrigerants or blends. • electric vehicle charging equipment • induction cooktops • rooftop solar and batteries • appliances with the top 15% of the best energy label index under the GEMS Act at the time of manufacture that do not contain refrigerants with a GWP greater than the published threshold.
Notes	The requirement for limiting refrigerant GWP is applied without a sunrise provision, as manufacturers, importers and distributors are unimpeded by current market limitations. Eligible GEMS energy label indexes can be found in Appendix 4

C16. Manufacture and Recycling of Batteries

Manufacture of rechargeable batteries, battery packs and accumulators for transport, stationary and off-grid energy storage and other industrial applications. Manufacture of respective components (battery active materials, battery cells, casings and electronic components). This includes recycling of end-of-life batteries.

Sector	Manufacturing and Industry
Activity	Manufacture and Recycling of Batteries
Associated ANZSIC codes	2439 Other Electrical Equipment Manufacturing
Objective	Climate change mitigation
	Technical screening criteria
Green	Until 2030, the activity complies with one of the following: A. The activity manufactures rechargeable batteries, battery packs and accumulators (and respective components), including from secondary raw materials, that result in substantial GHG emission reductions in transport, stationary and off-grid energy storage and other industrial applications. B. The economic activity recycles end-of-life batteries including Lithium ion batteries

C17. Manufacture of Plastics in Primary Form Through Recycling

Sector	Manufacturing and Industry
Activity	Manufacture of Plastics in Primary Form Through Recycling
Associated ANZSIC codes	
Objective	Climate change mitigation
	Technical screening criteria
Green	The activity complies with one of the following criteria: A. the plastic in primary form is fully manufactured by mechanical recycling of plastic waste; B. where mechanical recycling is not technically feasible or economically viable, the plastic in primary form is fully manufactured by chemical recycling of plastic waste and the life-cycle GHG emissions of the manufactured plastic, excluding any calculated credits from the production of fuels, are lower than the life-cycle GHG emissions of the equivalent plastic in primary form manufactured from fossil fuel feedstock.

FOR CONSULTATION

14 Are the proposed TSC credible? In this context, credibility of criteria refers to whether a transparent scientific approach aligned to the Paris Agreement temperature goal was used, informed by the latest technological understanding.

15. Are the proposed TSC usable? In this context, usability of criteria refers to whether they are comparable, clear, objective and easy to understand. If not, please explain how they could be improved.

16. Please provide any further feedback on specific activities here and provide evidence to support any recommendations.

8. For Consultation: Electricity Generation and Supply

A. Sector Context

Globally, decarbonisation of electricity generation is critical to meet the Paris Agreement and to enable the decarbonisation of other sectors. Furthermore, low-carbon production of electricity generation is both economically and technologically viable in most jurisdictions, including Australia.

The International Energy Agency's 2023 NZE2050 scenario shows that the global power sector will need to be largely decarbonised by 2040 to enable the net zero transition (IEA 2023a). CSIRO's (2023) CRD scenario and Climateworks Centre's 1.5°C and well-below 2C scenarios assume electricity emissions fall close to zero before 2040. CSIRO's (2024) G1.5/A40 scenario assumes electricity sector emissions fall 96.6 percent by 2040 and 98.1 percent by 2050 from 2025 levels. These figures are 82.2 percent and 97.5 percent in the G2/A50 scenario.

Decarbonising Australia's electricity system requires significant reductions in average emissions intensity to accommodate rising electricity demand growth. Under the range of scenarios, emissions intensity declines rapidly between now and 2040, which also reflects the maturity of low and zero-emissions technologies in the power sector (see Figure 17 below).

The decarbonisation of the sector is critical to meet Australia's broader climate objectives. According to emissions projections shown by IEA (2023b) the biggest lever for emissions reduction in Australia to 2030 is through the accelerated uptake of renewables in the electricity sector, facilitated through national, state and territory policies.

To decarbonise electricity generation the Australian Government has announced a national 82 percent of renewable electricity target by 2030. At COP28, the Australian government also joined the Global Pledge, which aims to triple the installed capacity of renewable energy and double the rate of energy efficiency improvements. A sustained uptake of renewables is also assumed in core reference scenarios, as well as others, as highlighted in Table 9.

Australia already has the highest share of rooftop solar per capita in the world, and solar PV together with wind were able to cover energy demand increases that have been recorded in the last decade.

Australia is one of a small number of countries where low-emissions sources of electricity grew by over 20 percent between 2018 and 2023, outstripping electricity demand growth and leading to reductions in the use of fossil fuels (IEA, 2024).

TABLE 9
Projected share of renewable electricity generation, 2035 and 2050 – key scenarios (CSIRO 2023, CCA 2024c)

		2035	2050
Scenario	**Scenario description**	**Renewable generation**	**Renewable generation**
AEMO	Green Energy Exports	99.3%	99.8%
Climateworks Centre	1.5C aligned	98.2%	99.8%
CSIRO	CSIRO Rapid Decarbonisation	98.1%	99.8%
CSIRO for CCA	A40/G1.5 – AusTIMES	93.2%	99.3%
AEMO	Step Change	95.6%	98.6%
Climateworks Centre	Well below 2C aligned	93.3%	99.7%
CSIRO for CCA	A50/G2 – AusTIMES	89.5%	98.8%

B. Methodology

The scope of economic activities selected within this sector has been guided by the taxonomy's core principles of credibility, usability, interoperability and prioritisation for impact. Credibility in this context is defined through consistency with the key global and Australian reference scenarios identified in Section 1, and with the taxonomy's transition methodology.

Activities have been selected based on their substantial contribution to the climate change mitigation objective. Zero and low-emissions technologies included as green activities in the electricity sector are readily deployable and identified in all scenarios as the key decarbonisation levers to prioritise for impact.

Table 10 provides an overview of activity selection and classification in the taxonomy. Each activity is coded 'D' to align with the ANZSIC classification for the electricity sector.

TABLE 10
Activity selection and classification – Electricity sector

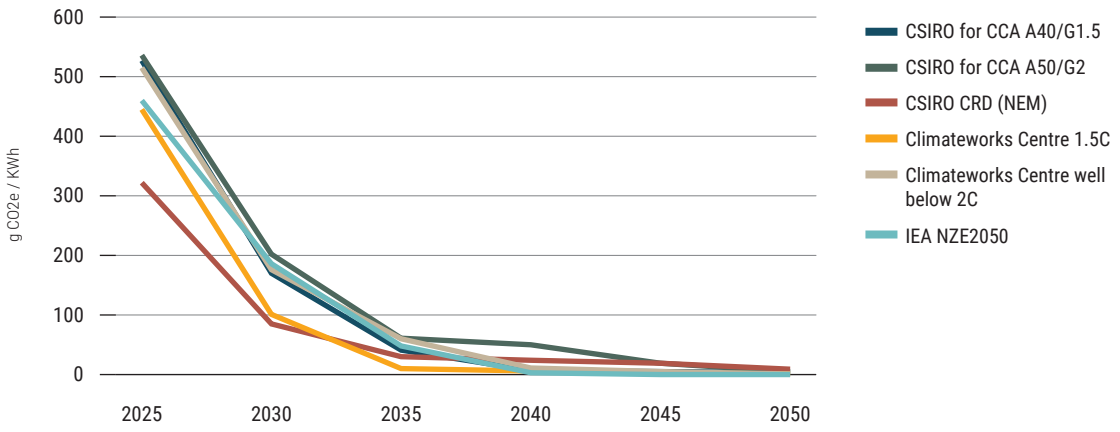
	Classification	
	Green	Transition
D1. Electricity Generation from Solar PV and CSP	✓	
D2. Energy Generation from Onshore and Offshore Wind	✓	
D3. Energy Generation from Ocean Energy	✓	
D4. Energy Generation from Hydropower	✓	
D5. Geothermal Energy Generation	✓	
D6. Energy Generation from Bioenergy	✓	
D7. Storage of Electricity	✓	
D8. District Heating and Cooling Systems	✓	
D9. Production of Heating or Cooling from Waste Heat	✓	
D10. Transmission and Distribution of Electricity	✓	
D11. Transmission and Distribution of Renewable and Low-carbon Gases	✓	

Emissions intensity thresholds

To be consistent with other taxonomies and approaches in other sectors, emissions intensity thresholds aligned with credible global and domestic scenarios are used to determine green criteria. The primary metric for measuring emissions intensity for electricity generation is gCO2e / kWh.

As Figure 17 demonstrates, on a Scope 1 basis, emissions intensity in Australia is assumed to decline rapidly. In 2035, the average emissions intensity assumed across the scenarios is 41.6g CO2/KWh, before falling to an average of 8.7 and 2.6 gCO2/KWh in 2045 and 2050 respectively.

FIGURE 17
Average Scope 1 emissions intensity of the electricity sector – global and Australian scenarios



Emissions intensity is proposed to be calculated on a lifecycle basis (LCA), which is consistent with other credible taxonomies globally. This includes Scope 1 emissions intensity and, importantly for the electricity sector, upstream emissions intensity values related to production considerations. LCA measurement is proposed to follow ISO 14067:2018 and ISO 14064-1:2018 standards, which respondents in the first public consultation identified as appropriate and usable.

Until 2030, the green threshold for new activities is set at 100g gCO2e / kWh to bring the average emissions intensity of the grid down at the pace required by pathways. After 2030, this threshold will reduce based on credible pathways, and considerations related to lifecycle emissions. The next version of the taxonomy will provide additional guidance following 2030, although the electricity generation activities that are currently included will remain eligible following 2030.

To aid usability and in line with the approach taken in other jurisdictions, certain types of electricity generation have been deemed directly eligible until 2030. For these types of generation, the evidence shows that in almost all cases, the life cycle emissions intensity is below the 100g threshold to 2030. This means that for these activities it is not necessary to measure LCA for each investment to demonstrate alignment with the criteria.

Gas as back-up firming in the taxonomy

The role of gas for electricity generation

Gas has a relatively minor and declining role in the Australia's electricity generation mix, having declined, on average, 7 percent a year in the NEM over the last decade (DCCEEW, 2024). Under key reference pathways, the share of gas-powered generation in the grid is expected to continue to decline.

The share of gas-powered generation in CSIRO's (2023) CRD scenario, and Climateworks Centres' 1.5°C and well below 2C scenarios is assumed to continually decline in absolute terms and as a percentage of the total electricity generation mix[1]. Under CSIRO's (2024) A40/G1.5 and A50/G2 scenarios for the Climate Change Authority, which consolidate gas and liquids, gas-powered generation is assumed to peak in 2030 and 2035, respectively, before continually declining to 0.7 percent and 1 percent of the mix in 2050. This is consistent with the IEA's NZE2050 analysis which assumes that "gas-fired generation peaks in the mid-2020s before starting a long-term decline" (IEA 2023a, p.82).

The role of gas to back-up firmed renewable electricity generation

The share of gas generation in the mix in AEMO's 2024 Integrated System Plan (ISP) Step Change scenario, which is aligned with ~ 1.8°C 'where relevant' (AEMO, 2024b), is higher than the taxonomy's reference scenarios. A key source of divergence between projected gas-powered generation in AEMO's 2024 ISP Step Change scenario relative to 1.5°C scenarios is the role of 'flexible gas'.

AEMO delineates between more continuous 'mid-merit gas' gas generation and 'flexible gas' generation. Flexible gas generation in the ISP provides a back-up role to renewables and firming "to support storages during renewable droughts and cover rare peak demand spikes". AEMO states that this represents "a change in the role of gas-powered generation from more continuous 'mid-merit' gas to a strategic, back-up role".

Under the 2024 ISP's Step Change scenario, the share of mid-merit gas-powered generation is assumed to continue to decline.

It is displaced by flexible gas generation which currently accounts for a marginal share of the mix but is assumed to exceed 1 percent of the mix (ex. storage) in 2036/37, peaking in 2044 before falling to 1.3 percent of the mix in 2050.

According to this shifting role, ISP 2024 assumes that flexible gas-powered generation capacity grows while utilisation decreases. AEMO notes that a typical flexible gas generator may generate just 5 percent of its annual potential. AEMO's Gas Statement of Opportunities (GSOO) 2024 reflects this variability, stating that gas-powered generation in the NEM "is forecast to be more weather-dependent and volatile in future years as it will be increasingly influenced by renewable energy availability, depending on the development of electrical alternatives" (AEMO 2024d, p.43).

AEMO's GSOO 2024 further notes that in the longer term, the "degree of investment in renewable electricity generation, transmission developments, storage developments and other alternatives will all influence the overall need for gas to contribute to the firming requirements" in the NEM.

As AEMO's 2024 ISP System Operability Review notes, this shifting role for gas-powered generation means that mid-merit gas-powered capacity, which is primarily provided by combined cycle gas turbines (CCGT), is expected to be replaced by open cycle gas turbines (OCGT) which are better suited to flexible operations (AEMO 2024c). The Review states that OCGTs are a more appropriate replacement technology when operating at lower capacity factors.

1 Calculations based on generation mix, excluding storage.

Can back-up gas firming be included as an activity in the taxonomy?

On average, OCGTs are more emissions-intensive than CCGTs. Of the existing, committed and anticipated gas-powered generators in the NEM, the average Scope 1 emissions intensity of CCGTs is 455.41 g CO2 / KWh, and the average emissions intensity of OCGTs is higher at 696.7 g CO2 / KWh (AEMO 2024b). A lifecycle emissions assessment increases this figure. The taxonomy follows reference scenarios in setting emissions intensity thresholds in the electricity sector, which fall below 100g after 2030 on a lifecycle basis.

The Australian taxonomy focuses on economic activities that make a substantial contribution to climate change mitigation. As an activity, gas-powered generation has a declining role in line with this objective and has readily deployable alternatives.

The taxonomy utilises scenarios according to the average emissions intensity of the electricity system based on global and Australian scenarios to inform the green criteria. This considers a determination about how the activity performs on average, rather than determinations about how often an individual asset is deployed.

As an activity-level tool, the taxonomy is unable to account for the inherent system-level uncertainties around when and whether the back-up function provided will be required, and generally focuses on avoiding carbon lock-in through the emissions performance of the whole activity, subject to the activity meeting the other methodological filters (see Section 2).

This is consistent with the International Capital Market Association's guidance that green enabling activities should not lead to locking-in high emitting activities relative to other technologically feasible and/or commercially viable solutions (ICMA, 2024).

The assessment of flexible gas-powered generation in the taxonomy does not preclude it as an investible activity in Australia. In recognition of the currently anticipated role of firming articulated in AEMO's 2024 ISP, the taxonomy offers a proposed framework to define how back-up gas firming capacity may be recognised and assessed within a credibly transitioning portfolio of generation and storage assets (see part D of this section).

Updates from public consultation

The electricity sector criteria put forward for consultation in May was considered by most respondents to be credible, usable and interoperable. Changes to the electricity sector section for the second public consultation period include:

1. Further definition and clarification of language in the technical screening criteria
   - Solar PV and CSP criteria: clarification that for remote/off-grid facilities, 15 percent non-renewable back-up generation at facilities is the maximum allowed accompanied by guidance on how to demonstrate compliance.
   - Hydropower generation criteria: inclusion of run-of-river hydropower generation activities.
   - Geothermal generation criteria: exclusion of hydraulic fracturing processes.
   - Bioenergy generation criteria: further detail regarding eligible and ineligible feedstocks.
   - District heating and cooling systems criteria: inclusion of refrigerant limits to ensure consistency with allowances in the Construction and Buildings criteria.
   - Transmission and distribution of low-carbon gases criteria: further detail regarding eligible low-carbon gases, linking eligibility to the fuels covered in the Manufacturing and Industry sector.

2. Development of gas firming advice

   Following support from 76 percent of respondents in the first public consultation, advice covering recognition of the role of gas firming in a credibly transitioning portfolio will be included in the second public consultation paper (see part D of this section).

TREATMENT OF GAS IN THE AUSTRALIAN TAXONOMY

Gas is an energy source that can be used in a range of economic activities. It is not a standalone economic activity. The role of gas in the transition will depend on how it is used. The uses have been assessed against the taxonomy methodology with reference to the key international and domestic reference scenarios.

As such, gas is not excluded from the taxonomy. For activities where gas is required to facilitate the transition of certain hard-to-abate industrial sectors, it can be used to meet the taxonomy criteria, particularly for high heat processes while electrification and low-carbon hydrogen technologies continue to mature. (Australian Industry Energy Transitions Initiative 2023; CSIRO 2023; Climate Change Authority 2024).

C. Technical Screening Criteria

D1. Energy Generation from Solar Photovoltaic (PV) and Concentrated Solar Power (CSP)

Sector	Electricity Generation and Supply
Activity	Energy generation from solar PV and CSP (including electricity, heat, cool)
Associated ANZSIC codes	2619 Other Electricity Generation 3109 Other Heavy and Civil Engineering Construction 3231 Plumbing Services 3233 Air Conditioning and Heating Services
Objective	Climate change mitigation
	Technical screening criteria
Green	Until 2030 all energy generation activities from solar PV and solar CSP are directly eligible. Remote / off-grid CSP facilities shall have no more than 15% of electricity generated from non-renewable sources. This provision is not included as eligible for any solar PV activity and/or grid-connected facility.
Specific ineligible cases	Power plants dedicated to support fossil fuel infrastructure (e.g., operations of fossil fuel activities) are ineligible
Additional notes	The following steps can be used to verify whether no more than 15% of electricity is generated from non-renewable sources: • Calculate annual net electricity production output of the plant in MWh, • Calculate the 15% share of this output • Apply conversion efficiency of the plant in question to derive thermal energy delivered in MWh • Apply lower heat value ratio and heat conversion factor of the fuel to estimate allowable annual consumption in the plant.

D2. Energy Generation from Onshore and Offshore Wind

Sector	Electricity Generation and Supply
Activity	Wind power generation
Associated ANZSIC codes	2619 Other Electricity Generation 3109 Other Heavy and Civil Engineering Construction
Objective	Climate change mitigation
	Technical screening criteria
Green	Until 2030 all electricity generation activities from onshore and offshore wind power plants are directly eligible.
Specific ineligible cases	Power plants dedicated to support fossil fuel infrastructure (e.g., operations of fossil fuel activities) are excluded

D3. Energy Generation from Ocean Energy

Sector	Electricity Generation and Supply
Activity	Electricity generation from ocean energy
Associated ANZSIC codes	2619 Other Electricity Generation 3109 Other Heavy and Civil Engineering Construct
Objective	Climate change mitigation
	Technical screening criteria
Green	Until 2030 all electricity generation activities from ocean energy are directly eligible.
Specific ineligible cases	Power plants dedicated to support fossil fuel infrastructure (e.g., operations of fossil fuel activities) are ineligible

D4. Energy Generation from Hydropower

Sector	Electricity Generation and Supply
Activity	Hydropower generation
Associated ANZIC codes	The economic activities in this category could be associated with several ANZIC codes, in particular: 2612 Hydro-Electricity Generation 3109 Other Heavy and Civil Engineering Construction
Objective	Climate change mitigation
	Technical screening criteria
Green	The activity must comply with either A or B: A. All pumped storage systems for hydropower plants that comply with either of the criteria are eligible: — *Power density greater than 5 W/m^2 or* — *Until 2030 emission intensity measured during the life cycle of the power plant is less than 100gCO_2e/kWh until 2030.* B. The electricity generation facility is a run-of-river plant and does not have an artificial reservoir.
Specific ineligible cases	Power plants dedicated to support fossil fuel infrastructure (e.g., operations of fossil fuel activities) are ineligible

D5. Geothermal Energy Generation

Includes electricity, heating, and cooling.

Sector	Electricity Generation and Supply
Activity	Geothermal energy generation (including electricity, heat, cool)
Associated ANZSIC codes	2619 Other Electricity Generation 3109 Other Heavy and Civil Engineering Construction 3233 Air Conditioning and Heating Services
Objective	Climate change mitigation
	Technical screening criteria
Green	Until 2030 the emission intensity measured during the life cycle of the power plant is less than 100gCO_2e/kWh.
Specific ineligible cases	Power plants dedicated to support fossil fuel infrastructure (e.g., operations of fossil fuel activities) are ineligible The use of hydraulic fracturing to create Enhanced Geothermal Systems is ineligible'

D6. Energy Generation from Bioenergy

Sector	Electricity Generation and Supply
Activity	Bioenergy power generation (including electricity, heat, cool)
Associated ANZSIC codes	2619 Other Electricity Generation 2619 Other Electricity Generation 3109 Other Heavy and Civil Engineering Construction 3233 Air Conditioning and Heating Services
Objective	Climate change mitigation
	Technical screening criteria
Green	Bioenergy power generation must comply with A, and either B or C: A. Until 2030 the emission intensity measured during the life cycle of the power plant is less than 100gCO_2e/kWh until 2030 B. Bioenergy produced from waste (e.g., agriculture, municipal sources) C. Feedstock used for production of bioenergy should comply with one of the following standards: — *Forest Stewardship Council (FSC)* — *Biomass Biofuels voluntary scheme (2BSvs)* — *Bonsucro (Better Sugarcane Initiative)* — *Roundtable of Sustainable Biomaterials (RSB)* — *Round Table on Responsible Soy (RTRS)* — *International Sustainability and Carbon Certification (ISCC and/or ISCC plus)*
Specific ineligible cases	Power plants dedicated to support fossil fuel infrastructure (e.g., operations of fossil fuel activities) are ineligible
Notes	Biomass used as a feedstock to produce bioenergy can be generated from a range of waste streams. Examples include: • agricultural crops and residues (e.g. maize, wheat, straw, animal manure), forestry (e.g. logs, stumps, leaves and branches), • wood-processing industries (bark, off-cuts, wood chips, sawdust) and from • organic waste (e.g. municipal solid waste and sewage sludge)

D7. Storage of Electricity

Sector	Electricity Generation and Supply	
Activity	Storage of electricity	
Associated ANZSIC codes	ANZSIC codes not available	Construction and operation of facilities that store electricity and return it at a later time in the form of electricity. The activity includes pumped hydropower storage.
Objective	Climate change mitigation	
	Technical screening criteria	
Green	The activity is the construction and operation of electricity storage including: • mechanical energy storage systems • thermal energy storage systems • pumped hydropower storage • electrochemical storage systems. Where the activity includes chemical energy storage, the medium of storage complies with the criteria for manufacturing of the corresponding product specified in the Manufacturing and Industry sector of the taxonomy.	

D8. District Heating and Cooling Systems

Sector	Electricity Generation and Supply
Activity	District heating and cooling systems
Associated ANZSIC codes	3233 Air Conditioning and Heating Services 5021 Pipeline Transport
Objective	Climate change mitigation
	Technical screening criteria
Green	All activities related to renewables-based district heating and cooling are eligible.
Specific ineligible cases	The following are ineligible: • Activities with GWP_{100} >10 refrigerants • Activities that introduce or extend the life of existing HFC refrigerants or blends or HCFC-charged equipment

D9. Production of Heating or Cooling from Waste Heat

Sector	Electricity Generation and Supply
Activity	Construction and operation of facilities that produce heat/cool using waste heat.
Associated ANZSIC codes	3109 Other Heavy and Civil Engineering Construction 3233 Air Conditioning and Heating Services
Objective	Climate change mitigation
	Technical screening criteria
Green	All activities related to the production of heat or cool from waste heat are eligible.

D10. Transmission and Distribution of Electricity

Sector	Electricity Generation and Supply
Activity	Transmission and distribution of electricity
Associated ANZSIC codes	2620 Electricity Transmission 2630 Electricity Distribution
Objective	Climate change mitigation
	Technical screening criteria
Green	The activity must comply with one of the following criteria: • Until 2030 transmission and distribution infrastructure dedicated to a direct connection or an expansion of connection between power plants with energy intensities less than 100gCO_2e/kWh (life cycle emissions) are directly eligible until 2030 • Transmission and distribution infrastructure dedicated to a inter-country/region direct or grid connection to access existing or new power plants with energy intensities less than 100gCO_2e/kWh (life cycle emissions) are directly eligible, until 2030 • Transmission and distribution infrastructure that is on a decarbonisation trajectory where at least 67% of the newly connected generation capacity in the system is below the generation threshold value of 100gCO_2e/kWh measured on a life-cycle basis, over a rolling five-year period; or the average system grid emissions factor is below the threshold value of 100gCO_2e/kWh measured on a life-cycle basis, over a rolling five-year average period until 2030 • All enabling ICT systems and smart management systems and those required for procurement of electricity that meet the green thresholds are eligible.
Specific ineligible cases	• Transmission and distribution infrastructure dedicated to connecting fossil fuel plants to the grid • Transmission and distribution infrastructure dedicated to a inter-country/region direct or grid connection to access existing or new power plants that is greater than a threshold set for green
Notes	The energy intensity computation of the infrastructure must be carried out for the electricity grid network under consideration. For interconnected grids, the computation must be carried out for the whole network.

D11. Transmission and Distribution of Renewable and Low-carbon Gases

Sector	Electricity Generation and Supply
Activity	Transmission and distribution of renewable and low-carbon gases, including but not limited to low-carbon hydrogen and its derivatives such as ammonia
Associated ANZSIC codes	2700 Gas Supply 3109 Other Heavy and Civil Engineering Construction 5021 Pipeline Transport
Objective	Climate change mitigation
	Technical screening criteria
Green	The activity must comply with either criteria A or B, and with criteria C and D: A. New gas transmission pipelines that are transporting 100% hydrogen and/or its derivatives and/or other low carbon gases. B. Retrofit of existing natural gas transmission pipelines to transport 100% hydrogen and/or its derivatives and/or other low carbon gases. C. Hydrogen and other low carbon gases have to meet taxonomy criteria (see: Manufacturing of Hydrogen; Energy Generation from modern bioenergy) D. The activity must meet all of the following: — *Leak detection, repair mechanisms and mitigation measures must be in place.* — *A plan to avoid and minimise gas leakages must be presented.*
Specific ineligible cases	Residential distribution networks are ineligible – i.e. any activity relating the retrofit of natural gas distribution lines of which end-user is a household sector
Notes	The criteria refer to low carbon gases understood as biogases, low carbon hydrogen and its derivative including synthetic fuels

D. Advice for addressing firming and back-up generation activities in a credibly transitioning portfolio

Recognising the currently projected system-level role for flexible gas-powered generation, to respond to variable peak demand needs and provide back-up support as the penetration of renewables in the grid grows, the taxonomy proposes a framework to define how such functions, and their overarching activities, can be articulated, recognised and assessed in a credibly transitioning portfolio of assets.

This advice extends beyond the boundaries of the activity-focused Australian taxonomy and provides a framework to evaluate the credibility of portfolios that include activities that provide gas firming activities.

It will aim to cover the following key issues:

- How may utilities and project developers demonstrate to financial institutions their progress toward credibly transitioning their power generation and storage asset mix?
- How can investment in assets that provide back-up support be recognised within a credibly transitioning portfolio of assets?
- What requirements/checks are needed of the system and how can these be applied to an entity?

Transition Plans: A Tool to Assess the Credibility of a Transitioning Portfolio

Taxonomies are classification systems that identify and quantify the contribution of individual economic activities to key sustainability objectives. Accordingly, taxonomies are not equipped to make portfolio or system-level assessments. Transition plans enable assessments of the credibility of transition progress at the portfolio level.

Generic frameworks, guidelines, and sector specific requirements have been developed by a variety of institutions. Each specify detailed expectations regarding the following components of the transition planning process:

- **Targets:** quantitative goals to measure the progress and success of the implementation of an entity's transition plan
- **Delivery strategy:** how the entity will align business activities and operations with its climate objectives and priorities
- **Accountability mechanisms:** how the entity is structured to provide oversight, incentivise, and support the implementation of the transition plan

This guidance focuses solely on identification of key requirements to assess a transition plan of a portfolio that may include firming assets.

Notably, this advice has been developed to support the consideration of firming in transition plans. This has not been explicitly covered in best-practice guidance to date. However, given the importance of firming – including shallow, medium and deep storage, and gas firming as back-up support – to support the decarbonisation of Australia's electricity system, this advice aims to provide an introductory framework.

TABLE 11
Entity and system-level considerations - transition plans

Linkage between the entity and the system in transition plans	
As noted by GFANZ, "the disclosure of transition plans, including the detailed assumptions and data that underpins these, enables the effective engagement and capital allocation across the financial ecosystem". The disclosure of assumptions that will govern an entities business and financial decisions – i.e the transition plan's delivery strategy – over the time horizon of decarbonisation process, will enable financial institutions to better understand factors on which the success of the transition plan will ultimately depend. These factors are predominantly external to the company and their disclosure allows entities to demonstrate how they expect the system in which they operate to change, and their operations to evolve in line with this. From the perspective of evaluating the credibility of portfolios which include fossil fuel-based firming, assumptions regarding aspects such as: technological developments (e.g. non fossil fuel-based firming); security of supply, demand projections, and cost competitiveness are, among others, especially important. Out of the frameworks recommending disclosure of assumptions, GFANZ and TPT require the greatest level of granularity, with best practice being sensitivity analysis. TPT recommends that "an entity should assess the sensitivity of its plan to changes in key assumptions and external factors on which it depends, and should seek to mitigate delivery risks where possible". The sensitivity analysis enables better assessment of how resilient the plan is to changes in the external factors and provides evidence that the entity has thought through the consequences of instances in which the selected assumptions fail to materialise in reality.	
GFANZ	**Transition Plan Taskforce**
Describe the key assumptions underlying the company's transition-related business, financial, and operational plans – e.g.: • activities or technologies that the company is not currently performing at scale (e.g., CCS and DAC); • actions of the company's supply chain; • development and implementation of policies and regulations; • significant shifts in demand for products or services; and • other external actions (e.g., level of grid decarbonization, action/subsidies for governments).	Disclose the nature of the key assumptions that it uses and external factors on which it depends, and their implications for the achievement of the Strategic Ambition of its transition plan, these may relate to matters such as: • policy and regulatory change • the decarbonisation trajectory of the global economy, relevant geographies, and/or sectors • macroeconomic trends (e.g. labour availability, cost of borrowing etc.) • microeconomic and financial factors (e.g. availability of finance, relative prices) • technological developments • access to counterparty data and reliability of data • shifts in client and consumer demand • the levels of warming over the short-, medium-, and long-term • the physical impacts of the changing climate, and the regional and spatial implications of these • the effectiveness of adaptation efforts and possible limits to adaptation, and the regional and spatial implications of these
Disclose how these assumptions are reflected in the company's financial statements and audit reports	Disclose the timeframes over which any key assumptions and external factors are expected to occur
Articulate the impact on the transition plan if certain assumptions prove incorrect.	Disclose whether and how the key assumptions are reflected in the entity's financial statements

Key Considerations for Gas Firming in Transition Plans

Targets

Cover the whole entity, consider the full range of levers that the entity has available, and cover short, medium and long-term emissions.

	Key Considerations	Purpose
For the transition plan	• Emissions targets cover the short-, medium- and long-term • Emissions targets do not exclude substantial portions of emissions • Emissions targets are benchmarked against scientific sectoral pathways / benchmarks	To verify if the entity's transition: • is aligned with science-based benchmarks, rather than subjectively designed pathways • comprehensively evaluates the climate impact of all of its actions, rather than its selected areas of economic activity • takes into account all material direct and indirect emissions
For firming	• Does the entity's 's long-term emissions goals align with the goals of the Paris Agreement with an aim to limiting warming to 1.5°C? • How aligned is the average CO2 intensity with the decarbonisation pathway set by targets? • Does the entity's 's goal include upstream scope 3 emissions	

Delivery Strategy

Connected to the entity's business and operations planning and financial accounts, and underpinned by assumptions and an analysis of dependencies and uncertainties.

	Key Considerations			Purpose
For the transition plan	• Action plans are comprehensive and consistent with the emissions targets. • Key assumptions and external factors on which the transition plan depends are identified.			The purpose of these requirements is to assess the connection between the targets and company's ability to achieve them. Without an assessment of the overarching plans, targets may sit in isolation and not be achieved.
For firming	**Existing capacity**	Renewables	What is the current share of renewable generation? Is this growing?	The purpose of this consideration is to place the firming capacity in context – i.e. if fossil-based capacity is increasing but the share of renewables remains static or declining, this can signal that the portfolio is not transitioning according to a credible pathway.
		Firming	• Is there a plan to decarbonise firming capacity? • Does the company distinguish between fossil and non-fossil firming? • How is firming capacity enabling the increase of renewables penetration and how is this demonstrated? • What are key system level assumptions validating maintenance of transitional capacity – firming power plants? • Is the evidence base underpinning assumptions credible? • How is the entity considering the use of other non-fossil firming technologies?	The purpose of this consideration is to understand the extent to which the entity is using firming capacity to enable further renewable energy penetration. There should also be evidence to support this claim provided. It is also to assess how reliant on fossil-based firming capacity the entity is for the foreseeable future. The majority of firming will need to be decarbonised under 1.5°C pathways, and the ISP's optimal development path. An aligned portfolio should be assessing and testing alternatives and their viability. Entities that do not distinguish between fossil and non-fossil firming capacity in their targets impede the ability for lenders and investors to understand how the entity is also investing in non-fossil capacity as required by 1.5°C scenarios.
		Transition away	Does the transition plan address decarbonisation / transition away from fossil fuels / phase out as a decarbonisation lever?	A credible transition will be underpinned by the scaling of renewable capacity and the phase down of fossil-based capacity. Transition plans should address both of these levers.
	New capacity	Renewables	Is the percentage of renewable capacity as a proportion of portfolio increasing?	To follow the decarbonisation pathway and thus to bring down emissions of the entity, new investments should focus on scaling up zero-emission technologies to replace assets that are being phased-out.
		Firming	• Is new firming capacity enabling a further increase in renewable energy penetration? To what extent is additional firming capacity required for this? • What are key system level assumptions validating development of new firming capacity? • Is the evidence base underpinning assumptions credible? • How is the entity considering the development of other non-fossil firming technologies?	System level assumptions are important for validating the fit of the firming capacity within a credible system. If the system-level assumptions are not in line with 1.5°C then the firming capacity assumptions would also not be aligned.

Accountability Mechanisms

	Key Considerations	Purpose
For the transition plan	• Sufficient disclosure around the transition plan, and specifically all emissions and non-emissions targets. • Independent evaluation of the transition plan.	The credibility of transition, and associated assumptions, have to be underpinned by objective, independent, science based sources. These would need to be disclosed to ensure transparency. Third party verification helps to bring legitimacy of the choices made to select sources and methodologies for assessment.
For firming	• Has the entity disclosed and is using credible data/scenarios to assess above? • Is there third-party verification to assess credibility of scenarios and assumptions?	

FOR CONSULTATION

17. Are the proposed TSC credible? In this context, credibility of criteria refers to whether a transparent scientific approach aligned to the Paris Agreement temperature goal was used, informed by the latest technological understanding.

18. Are the proposed TSC usable? In this context, usability of criteria refers to whether they are comparable, clear, objective and easy to understand. If not, please explain how they could be improved.

19. Does the firming advice adequately address the entity and system-level interactions related to firming activities in transition plans? Please provide any additional feedback on the advice, and where providing recommendations please include evidence.

20. Please provide any further feedback on specific activities here and provide evidence to support any recommendations.

9. For Consultation: Construction and Buildings

A. Sector Context

Decarbonising the building sector can contribute significantly to meeting the goals of the Paris Agreement. Emissions sources include direct emissions from using gas (for water heating, space heating, and cooking) and indirect emissions from using non-renewable electricity (for cooling, ventilation, lighting, and equipment). Transitioning to low-emission or net zero-emission buildings is essential for reducing these emissions.

According to the International Energy Agency (IEA 2022), building operations account for approximately 26 percent of global energy-related CO2 emissions. This figure excludes embodied emissions from the construction process. The World Green Building Council estimates building construction contributes another 11 percent to global greenhouse gas emissions. These emissions arise during the procurement, manufacturing, transport, and installation of building materials.

According to the CSIRO (2023), building operations were responsible for approximately 20 percent of Australia's total emissions in 2020. Electricity comprised 58 percent of energy consumption in 2020, with gas accounting for most of the remaining energy use.

The building sector's potential to contribute to decarbonisation has been recognised in Australia for many years with energy efficiency embedded in the national construction code; widely used voluntary energy and green building rating tools; and requirements for mandatory disclosure of energy ratings for commercial offices at the point of sale or lease.

Despite these efforts, challenges remain in achieving deep decarbonisation in the Australian buildings sector. These include addressing the significant stock of existing buildings, encouraging the adoption of energy efficiency and electrification across all building use types, and overcoming financial barriers to implementing energy-efficient and low-emissions solutions.

The main decarbonisation levers for the building sector are:

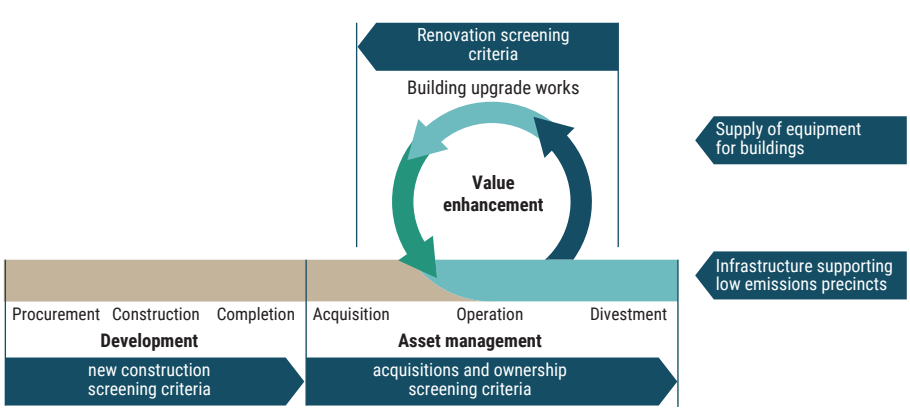
- Removing dependency on the use of fossil fuels as an energy source.
- Reducing emissions and improving energy efficiency in the operation of existing buildings through retrofits and renovations.
- Constructing new buildings to reduce construction impacts and maximise the potential for energy-efficient and low-emission operations.
- Onsite renewable energy generation, wherever feasible to reduce demand and contribute to the decarbonisation of electricity supply.
- Phasing out the use of Synthetic Greenhouse Gases as refrigerants in air conditioning systems and hot water heat pumps.

However, the diversity of assets, owners and operators of buildings requires careful consideration of how measures should be applied to various asset types and investment values.

B. Methodology

Each activity within the building sector is provided with Green and/or Transition Technical Screening Criteria. The activities relevant to a building's economic lifecycle are shown below.

FIGURE 18
Relationship of buildings screening criteria over the typical lifecycle



Accordingly, the activities and classifications in scope in the sector are as follows:

TABLE 12
Activity selection and classification – Construction and Buildings sector

		Green	Transition/decarbonisation measures
Direct	E1. New Construction	✓	
	E2. Acquisition and Ownership	✓	✓
	E3.Renovation	✓	✓
	E4. Upgrades: Large	✓	✓
	E5. Upgrades: Small	✓	
Indirect	E6. Supply of Equipment for Building	✓	
	E7. Supporting infrastructure	✓	

Sunrise and sunset dates

The Transition Technical Screening Criteria in the Buildings sector is subject to a sunset date of 1 July 2031. After this date, there will be no Transition criteria.

Some threshold measures with the Technical Screening Criteria will come into effect on a sunrise date to allow the industry time to adapt. The sunrise date is set at 1 January 2027.

CHANGES SINCE THE FIRST PUBLIC CONSULTATION

The following changes have been made to the TSC since the first public consultation.

- Clarification of intent regarding measuring embodied carbon in the New Construction TSC
- Clarification of how climate alignment is achieved in the New Construction Criteria
- Clarification on the application of the current version of the National Contraction code in the New Construction TSC.
- Removal of refrigerant GWP measures from Acquisition and Ownership Criteria
- Refinement of refrigerant GWP thresholds by equipment type and capacity in New Construction, Renovation and Upgrade TSC.
- Removal of rooftop solar measures from New Construction, Acquisition and Ownership and Renovation TSC.
- Added thresholds for Data Centres in New Construction TSC.

Application of guidance across the Buildings sector

The following guidance applies generally across the TSC in the Buildings sector.

Assessment methods

Primary source data can be used to address all screening criteria. For example, an office's emission intensity can be verified from energy bills, published emissions factors, and the net lettable area of the building. This allows the use of information already at hand.

Wherever possible, existing assessment methods available within the building sector are used. The range of assessment methods is expected to expand over time as the industry adopts new tools and expands existing tools to cover additional aspects of the screening criteria.

Assessment methods may include proxies for screening criteria or for part of screening criteria. In this case, a third-party verified measure will be taken as provided full confirmation of alignment with the screening criteria, or the relevant part of the screening criteria.

A framework for weighing the suitability of potential proxies has been developed to balance the credibility of emission accounting and the benefits of improved usability. The framework is summarised in the box below.

Multiple proxies may be applied to demonstrate compliance with the screening criteria and maximise the taxonomy's usability for domestic and overseas building-related activities.

FRAMEWORK FOR ASSESSING PROXIES

The framework for assessing proxy methods establishes the attributes of a standard, code, rating, or labelling scheme that are suitable for confirming whether an activity meets the transition or green screening criteria.

Table 13 summarises the principles used for the evaluation of whether an assessment method is suitable to support the taxonomy.

Table 13 Principles to assess the suitability of proxies – Construction and Buildings

Credibility	Assessment methods should demonstrate a good correlation to the underlying requirements of the relevant screening criteria. Where the screening criteria requirements are binary, the assessment method needs to provide full alignment. Where the screening criteria are numeric, the assessment method should demonstrate consistent and good correlation when applied to individual buildings.
Usability	Usability considers the rate of current usage of the method or the ease and cost efficiency of adoption at a broader scale. The consideration of usability extends to efficiencies achieved by consistency with other climate-related reporting and investment frameworks and the ease of access to records when financing. The primary aim is to reduce implementation friction, avoid proprietary or bespoke processes, and avoid reliance on any single method.
Balance	The assessment of methods should also consider the inherent nature of the type of buildings. For example, investment-grade assets are able to accurately capture and report relevant data, whereas residential financing presents many challenges for reliable data collection.

Demonstrating climate alignment

The screening criteria for new construction require additional climate mitigation beyond regulation in Australia. This is achieved by broadening the scope of criteria beyond energy efficiency where regulation is driven by Commonwealth and state and territory governments' commitment to the Trajectory for Low Energy Buildings. The additional screening criteria for no fossil fuel use, limiting the GWP of installed refrigerants and limiting the embodied greenhouse gas emissions in buildings provide significant climate mitigation benefits. When combined, the screening criteria are more ambitious than the minimum energy efficiency requirements of the NCC and aligned to the climate alignment principles adopted in the screening criteria of taxonomies in other jurisdictions, such as the EU.

Global Warming Potential of refrigerants

The screening criteria for activities that involve the installation of new plant or equipment establish thresholds for the maximum GWP values for refrigerants, by equipment type and size. The equipment covered includes all stationary plant and equipment such as air conditioning units, chillers and heat pumps and supermarket refrigeration.

Domestic-scale appliances such as fridges and freezers are excluded.

Refrigerant GWP_{100} values used for comparison to the published thresholds are to be IPCC AR4 (2007) values as published by DCCEEW.

ADDITIONAL CONSIDERATIONS FOR REFRIGERANTS

In developing the criteria for refrigerants, consideration has been given to the potential for creating adverse outcomes by encouraging the use of HFO (hydrofluoroolefin) ultra-low GPW refrigerants that are included in potential EU regulatory restrictions that expand the definition of PFAS (per- and polyfluoroalkyl substances) to include a broader range of chemicals.

The broader definition of PFAS being applied in the EU also includes most HFCs (hydrofluorocarbons) that are already commonly used for air conditioning within buildings in Australia. The only currently used HFC not included in the proposed UE regulatory restriction is R32.

Because PFAS concerns are already inherent in the currently used HFC refrigerants, the Technical Screening Criteria to limit the GWP of refrigerants will not create an adverse outcome.

Importantly, the Technical Screening Criteria to limit the GWP of refrigerants do not require HFOs to comply with any initial or future GWP thresholds. Small and medium A/C units have an initial maximum GWP threshold of 700, which can be met with R32. PFAS will also be managed as part of the Do No Significant Harm framework, aligning to Australian government regulations and restrictions.

Sunset date

To confirm the sunset date of the Transition TSC, the impact of delaying the transition away from fossil fuels was tested. The testing considered that a typical plant's useful life would be 25 years and the additional annual greenhouse gas emissions in the sector if the electrification process is delayed by a year and the end-of-life replacement is like for like.

The testing showed that for each year of missed end-of-life electrification, the sector's annual greenhouse gas emissions would increase by ten percent. The simple testing of lost electrification opportunities confirms that the sunset date should not be extended. The simplified testing is shown below using a commercial office in greater Sydney as an example of impact.

TABLE 14
Case study - impacts of sunset date extension

A	Asset life (yrs)	25	years
B	existing stock NSW	49,242,590	m2
C	proportion existing stock in asset replacement cycle each year **(B/A)**	4 percent	
D	2050 GHG cost of gas lock-in	5.3	$kgCO_2e.m2/annum$
E	GHG cost of gas lock-in per year of missed asset replacement cycle **(B*C*D/1000)**	10,439	$tCO_2e/annum$
F	2050 residual emissions, assuming electrification	102,000	$tCO_2e/annum$
G	percent increase in 2050 emissions from deferring full electrification at asset replacement by 1 year **(E/F)**	10 percent	

C. Technical Screening Criteria

Table 15 summarises the performance requirements and features of the buildings sector criteria:

TABLE 15

Green and transition criteria features - Construction and Buildings

Activity	Alignment	Emission/ Energy threshold	No Fossil Fuel	Synthetic Greenhouse Gases	Embodied Carbon	Renewable Energy
New Construction	Green	✓	✓	✓	✓	
	Transition					
Acquisition and Ownership	Green	✓	✓			
	Transition	✓				
Renovation and upgrades	Green	✓	✓	✓		
	Transition	✓				
Residential and small commercial upgrades	Green	✓	✓	✓		✓
Manufacturing and Supply of goods	Green	✓	✓	✓		✓
Supporting infrastructure	Green	✓	✓	✓		✓

✓ Green criteria

✓ Green criteria implemented after sunrise date

✓ Transition criteria only available before sunset date

E1. Construction of new buildings

The screening criteria for new buildings apply to all building types except for the embodied emissions measure, which is planned to apply only to constructing buildings with a Gross Floor Area greater than 5000m2 and is subject to coverage by the new national method of measure being developed by NABERS.

Refrigerant GWP and embodied emissions thresholds are both sunrise provisions and become effective on 1 January 2027.

The screening criteria will leverage the national method of measure (forthcoming NABERS method), and the sunrise date will be deferred if a suitable national measurement method targets, reporting requirements, assessment methods and reliable benchmarking data are unavailable.

References to the National Construction Code (NCC) within the TSC mean the current edition published by the Australian Building Codes Board no earlier than 12 months prior to the date of construction approval.

State-based variations to NCC energy efficiency requirements are permitted only where scheduled within the NCC and the underlying NCC energy efficiency standards are maintained or improved. An example of a permitted variation is the NSW variations that facilitate using BASIX. State-based amendments that adopt previous versions of the NCC with lower energy efficiency standards are not permitted.

Sector	Buildings
Activity	Construction of new buildings
Associated ANZSIC codes	E301 Residential Building Construction E3020 Non-residential Building Construction E32 Construction Services
Objective	Climate change mitigation
	Technical screening criteria
Green	The construction of new buildings must meet all of the following criteria: A. Constructed to the relevant energy efficiency requirements of the published National Construction Code at time of building approval/construction B. Constructed to avoid future emissions from the onsite combustion of fossil fuels C. Constructed to limit the global warming potential of installed refrigerant inventory.* D. Constructed to limit the amount of greenhouse gas emissions resulting from the materials used and the process of construction.*
Notes	* Sunrise provision

E2. Acquisition and ownership

The screening criteria for acquisition and ownership establish energy and emission intensity targets for a range of building classes. The emissions boundary and intensity denominator vary for different building types to suit the nature of ownership and control. The information refined to apply the targets to each building type can be found in Appendix 4.

The availability of reliable benchmarking data or access to in-use operational performance data limits the number of building types covered. However, as data availability improves, the breadth of coverage is expected to grow over time.

Energy and emissions targets for all building types currently able to be screened for acquisition and ownership activities are provided in a Worksheet downloadable from the ASFI website.

Sector	Buildings
Activity	Acquisition and ownership
Associated ANZSIC codes	L6712 Non-Residential Property Operators L6711 Residential Property Operators H4400 Accommodation Q8601 Aged Care Residential Services
Objective	Climate change mitigation
	Technical screening criteria
Green	The activity must comply with criteria A and B. A. An energy intensity at or below the published target B. No fossil combustion on site
Transition*	The building must be operated with an emissions intensity at or below the published target. *See the attached worksheet - Construction and Buildings Emissions Targets - Australian Sustainable Finance Taxonomy.*
Notes	* Sunset provision

E3. Renovation and upgrades

Three activities are covered within renovation and upgrades to suit different scales of intervention and investment, from renovating a building or replacing major plant and equipment to installing domestic scale low carbon appliances and equipment.

Percentage reductions in energy and emissions hurdles where applied are to be measured before and after the works. To finance the works, the savings required can be demonstrated through calculation and must be included in the works contract and contracted post-works verification requirements.

Renovation activities cover any work within a building that results in repositioning the building's in-use operating performance. The Green TSC does not require a pre-works measure of performance. The Transition TSC is to be assessed based on the building's operational emission reduction, not the reduction of works components.

Sector	Buildings
Activity	Renovation
Associated ANZSIC codes	E301 Residential Building Construction E3020 Non-residential Building Construction E32 Construction Services
Objective	Climate change mitigation
	Technical screening criteria
Green	The renovated building must meet all of the following criteria: A. Meet all relevant Green screening criteria provided for the Acquisitions and Ownership of existing buildings. B. Limit the global warming potential of installed refrigerant inventory.* C. Where a building is constrained by heritage listing, a 30% reduction in emissions is to be achieved.
Transition**	The renovated works must meet all of the following criteria: A. Reduce the operational emissions of the building by more than 30 percent. B. Not include fossil fuel combusting equipment, or extend the life of existing fossil fuel combusting equipment. C. Not include refrigerants above the published GWP threshold or extend the life of existing HFC or HCFC charged equipment*.
Notes	* Sunrise provision ** Sunset provision

E4. Renovation and upgrades: Replacement of major plant and equipment

Replacement of plant and equipment and end-of-life with climate-aligned future-proof alternatives is a key strategy to reposition existing buildings.

The boundary of energy/emissions improvement to be measured is limited to the plant and equipment that is being replaced. The savings required can be demonstrated through calculation and must be included in the works contract and contracted post-works verification requirements.

Sector	Buildings
Activity	Replacement of major plant and equipment
Associated ANZSIC codes	E301 Residential Building Construction E3020 Non-residential Building Construction E32 Construction Services
Objective	Climate change mitigation
	Technical screening criteria
Green	The plant replacement works must meet A, and either criteria C or B. A. improve the energy efficiency of the replaced services by more than 30 percent. B. replace all fossil fuel combusting plant and equipment with electric alternatives and have refrigerants that meet the published maximum GWP requirement at the time of supply*. C. Replace all HFCs or HCFC equipment on-site with alternatives having a GWP_{100} <10 and not using fossil fuel combustion.
Transition**	The plant replacement works must meet A, and either criteria B or C: A. Improve the energy efficiency of the replaced services by more than 30 percent, B. not include fossil fuel combusting equipment or extend the life of existing fossil fuel combusting equipment. C. Do not include refrigerants above the published GWP threshold or extend the life of existing HFC or HCFC-charged equipment*.
Notes	* Sunrise provision ** Sunset provision

E5. Renovation and upgrades: Residential and small commercial upgrades

The technical screening criteria support the financing of the installation of small-scale equipment, appliances, and upgrades where the climate mitigation benefits do not require verification testing.

Sector	Buildings
Activity	Residential and small commercial
Associated ANZSIC codes	E301 Residential Building Construction E3020 Non-residential Building Construction E32 Construction Services
Objective	Climate change mitigation
	Technical screening criteria
Decarbonisation measures	The installation of any of the following components: • heat pumps that meet the published maximum GWP requirement at the time of supply*. • electric vehicle charging equipment • Induction cooktops • Installation of rooftop solar and batteries • appliances with the top 15 percent of the best star ratings under the GEMS Act, and if containing refrigerants, meet the published maximum GWP requirement at the time of supply*. • thermal improvements to meet state and national regulations and incentive schemes.
Notes	* Sunrise provision Eligible GEMS star ratings can be found in Appendix 4.

E6. Supply of equipment for buildings

The technical screening criteria support manufacturing, importation, and wholesaling of equipment activities that support the building sector's climate alignment.

Sector	Buildings
Activity	Supply of equipment for buildings
Associated ANZSIC codes	C24 Machinery and Equipment Manufacturing F349 Other Machinery and Equipment Wholesaling
Objective	Climate change mitigation
	Technical screening criteria
Decarbonisation measures	Any of the following products and their key components are manufactured, imported or distributed: • heat pumps and compressors and air conditioning systems not using HFCs refrigerants or blends. • electric vehicle charging equipment • induction cooktops • rooftop solar and batteries • appliances with the top 15 percent of the best energy label index under the GEMS Act at the time of manufacture that do not contain refrigerants with a GWP greater than the published threshold.
Notes	The requirement for limiting refrigerant GWP is applied without a sunrise provision, as manufacturers, importers and distributors are unimpeded by current market limitations. Eligible GEMS energy label indexes can be found in Appendix 4.

E7. Infrastructure supporting low emissions precincts

The technical screening criteria support the delivery and operation of infrastructure at the precinct scale. Precinct infrastructure is usually delivered to support buildings in a defined master plan or development area.

Utility-scale infrastructure delivered and operated independently of a defined masterplan or development activity is to be assessed under the relevant Technical Screening Criteria of the Energy sector.

Sector	Buildings
Activity	Infrastructure supporting low emissions precincts
Associated ANZSIC codes	E32 Construction Services E3109 Other Heavy and Civil Engineering Construction E2619 Other Electricity Generation E263 Electricity Distribution
Objective	Climate change mitigation
	Technical screening criteria
Decarbonisation measures	The following infrastructure is installed to provide physical delivery of low emissions and efficient energy sources to buildings with a precinct, community of district: • Embedded electricity networks providing 100 percent - renewable energy through on-generation and long term-voluntary retirement of Renewable Energy Certificates and without reliance on electricity retailing contracts with the building owners and occupiers. • Central thermal energy, including hot water and chiller water provisions that do not use fossil fuels or refrigerants with a GWP greater than 10. • Site works associated with the decommissioning of fossil fuel infrastructure in support of precinct electrification.
Notes	The requirement to limit refrigerant GWP is applied without a sunrise provision.

FOR CONSULTATION

21. Are the proposed TSC credible? In this context, credibility of criteria refers to whether a transparent scientific approach aligned to the Paris Agreement temperature goal was used, informed by the latest technological understanding.

22. Are the proposed TSC usable? In this context, usability of criteria refers to whether they are comparable, clear, objective and easy to understand. If not, please explain how they could be improved.

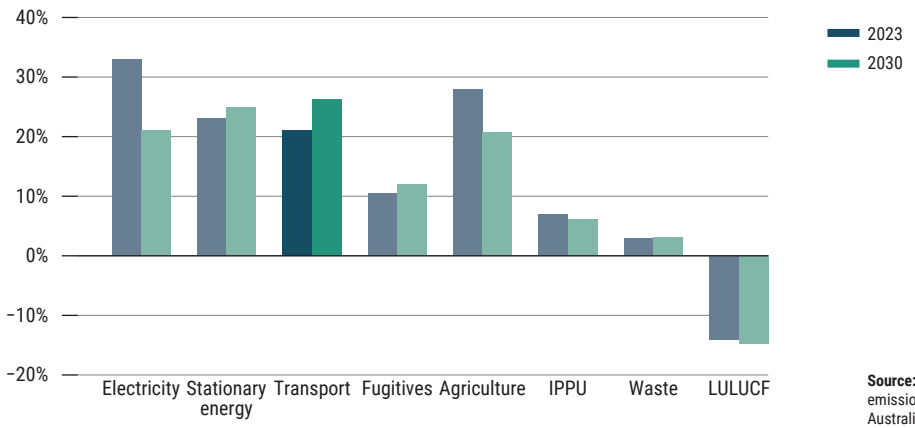
23. Please provide any further feedback on specific activities here and provide evidence to support any recommendations

10. For Consultation: Transport

A. Sector Context

Australia's transport sector is the third largest source of Australia's greenhouse gas emissions, accounting for 22 percent of total emissions (DCCEEW, 2024). Since 2005, transport-related emissions have been among the fastest growing, having increased by 19 percent (DITRDCA, 2024).

FIGURE 19
Transport sector emissions as a percentage of Australia's total - 2023 and 2030 under business-as-usual

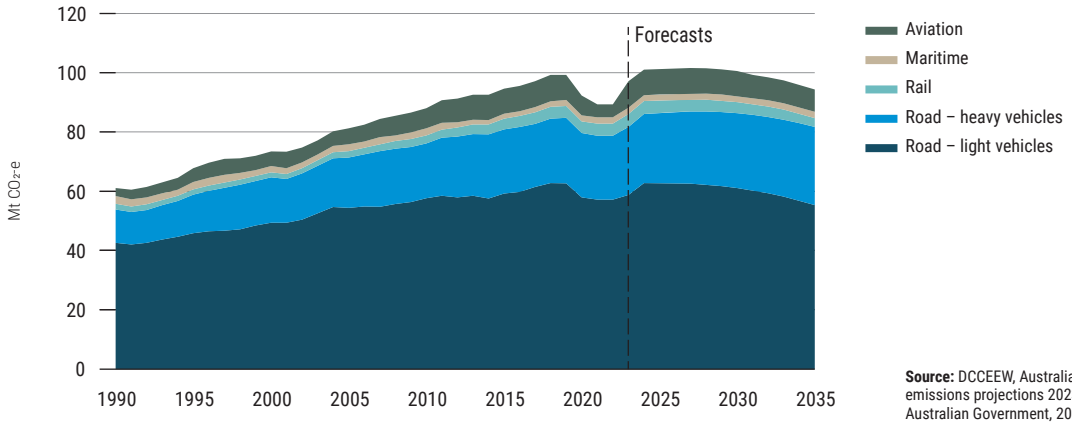


Source: DCCEEW, Australia's emissions projections 2023, Australian Government, 2023.

Without further action, transport will be the largest source of emissions in Australia by 2030, comprising 26 percent of direct emissions, underscoring the importance of taking immediate action to decarbonise the sector.

The Australian government is developing a comprehensive policy platform to drive emissions reductions across transport and infrastructure. The Transport and Infrastructure Net Zero Roadmap and Action Plan, which is undergoing consultation, lays out a comprehensive blueprint to address transport emissions across all modes material to Australia's transport sector.

FIGURE 20
Actual and projected transport sector emissions (DITRDCA, 2024)



Source: DCCEEW, Australia's emissions projections 2023, Australian Government, 2023.

The Roadmap consolidates existing and new government initiatives, including the New Vehicles Efficiency Standard and National Electric Vehicle Strategy; funding to scale Low-carbon Liquid Fuel (LCLF) production under the FMIA policy platform for hard-to-abate sectors; and, relatedly, priorities to decarbonise air transport articulated in the Aviation White Paper. The Roadmap also articulates priorities for rail transport decarbonisation, also highlighting the important role of mode shifting initiatives in contributing to reducing transport sector emissions.

Road transport constitutes the largest share of transport emissions in Australia, positioning the sub-sector is both a priority and opportunity. While only currently accounting for one percent of Australia's light vehicles, electric vehicles are a commercial mature and readily deployable solution in light and bus transport (Climate Change Authority, 2024).

Heavy road transport emissions from rigid and articulated vehicles are harder to abate, although. In the interim, the use of drop-in LCLFs, particularly renewable diesel, can play an important role in reducing emissions.

As the Aviation White Paper notes, sustainable aviation fuel (SAF) is currently the largest lever available to decarbonise air transport, although electric technologies for shorter, regional flights are expected to continue to mature in the medium-term.

Fuel switching to LCLFs is also an important short to medium-term lever for decarbonising freight rail transport, another hard-to-abate activity which can contribute to broader emissions reductions in the transport sector by absorbing demand for freight carried through more emissions-intensive modes. Electrification of freight rail transport is a significant longer-term abatement opportunity (Australian Railway Association, 2024; DITRDCA, 2024).

The use of low-carbon ammonia and methanol are the most feasible means by which to decarbonise shipping in the short-term. There are also substantial abatement opportunities related to port operations, as demonstrated by the Clean Energy Finance Corporation's recent investment in the electrification of South Australian ports (Clean Energy Finance Corporation, 2024).

The development of enabling low-carbon infrastructure is essential to enable emissions reductions through these modes, and incentivising mode shifting.

B. Methodology

Transport sector activities in the Australian taxonomy have been prioritised on the basis of their emissions share. Green and transition criteria is informed by the key decarbonisation levers articulated above. Table 16 provides an overview of activity selection and classification in the taxonomy.

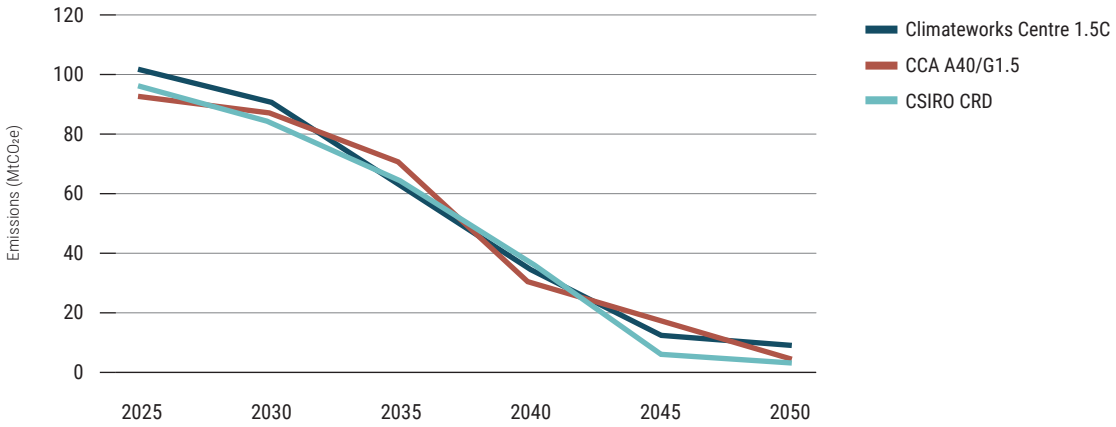
Each activity is coded 'I' to align with the ANZSIC classification for the transport sector.

TABLE 16
Activity selection and classification – Transport sector

	Classification	
	Green	Decarbonisation measures
I1.Road passenger transport – motorbikes, cars and light commercial vehicles	✓	
I2. Road passenger bus transport	✓	
I3.Micromobility	✓	
I4. Road freight transport – rigid trucks	✓	✓
I5. Road freight transport – articulated trucks	✓	✓
I6. Passenger and freight air transport	✓	✓
I7. Air transport ground handling operations	✓	
I8.Urban and suburban passenger rail transport	✓	
I9. Interurban passenger rail transport	✓	✓
I10.Freight rail transport	✓	✓
I11.Inland passenger and freight water transport	✓	
I12.Maritime passenger and freight water transport	✓	✓
I13. Vessels for port operations	✓	
I14.Low-carbon road transport infrastructure	✓	
I15. Micromobility infrastructure	✓	
I16.Low-carbon public transport infrastructure	✓	
I17. Low-carbon air transport infrastructure	✓	
I18.Low-carbon rail transport infrastructure	✓	
I19. Low-carbon water transport infrastructure	✓	

The emissions trajectories for the transport sector are broadly consistent across Australian scenarios, including Climateworks Centre's (2023) 1.5°C scenario, CSIRO (2023) CRD scenario, and CSIRO's (2024) A40/G1.5 scenario. Under the scenarios, emissions reduce from 90-100 MtCO2e in 2025 to 30-40 MtCO2e in 2040, before declining rapidly in the 2040s to 4-10 MtCO2e in 2050. Climateworks Centre's transport sector scenarios, which include emissions intensity pathways across road and rail transport modes, have been used to inform green criteria.

FIGURE 21
Australian scenarios for the transport sector



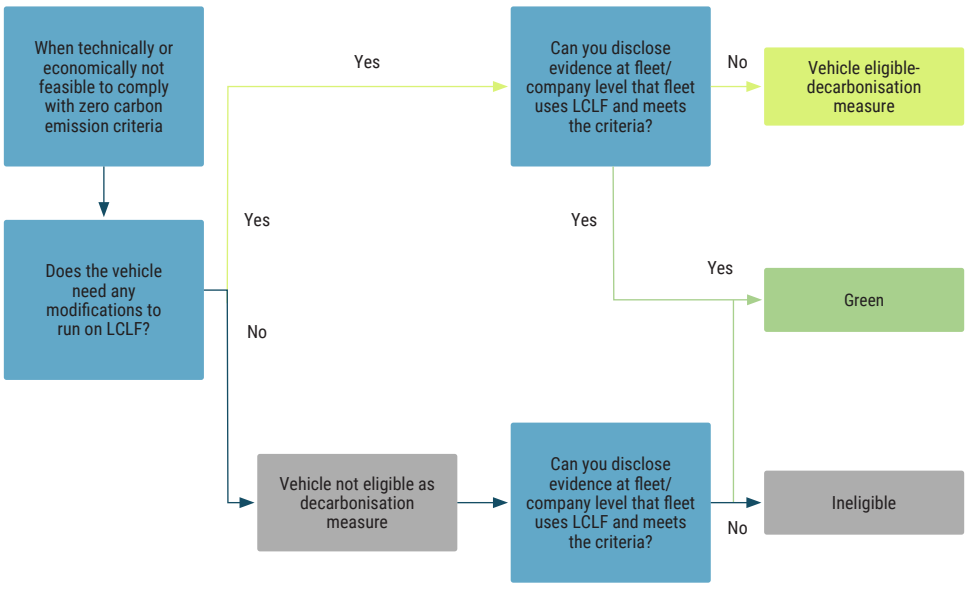
Role of Low-carbon Liquid Fuels

LCLFs are anticipated to be an important short to medium-term decarbonisation lever for hard-to-abate transport modes. This is recognised in the Australian government's Low-Carbon Liquid Fuels consultation paper, which identifies the production and deployment of renewable diesel and SAF as priorities (DITRDCA & DCCEEW, 2024).

The production of LCLFs is covered in the Manufacturing and Industry sector in the Australian taxonomy, and their use in road, air and rail transport is covered in the Transport sector. Their use in mining operations is covered in the Minerals, Mining and Metals sector of the Australian taxonomy.

Figure 22 provides an overview of how LCLFs are applied in line with the taxonomy's methodology, including considerations related to fleet purchases and retrofitting with respect to LCLF adoption.

FIGURE 22
Methodology – treatment of low-carbon liquid fuels in the Australian taxonomy



SUNSET DATE FOR THE ADOPTION OF LCLFS AS AN ELIGIBLE DECARBONISATION MEASURE

LCLFs are an important interim measure for facilitating emissions reductions in hard-to-abate transport sectors. For this reason the purchase of, and measures to improve the supply of, LCLFs are included as eligible decarbonisation measures. Additionally, in certain instances, the acquisition and retrofitting of assets to enable LCLF use is also included as a decarbonisation measure.

However, in line with the taxonomy's transition methodology, such measures are generally time-bound and aim to bring activities to closer alignment with green criteria. For this reason, a sunset date has been included on decarbonisation measures is proposed to account for the expected technical and commercial maturity of technologies that enable electrification of hard-to-abate transport activities.

This does not exclude the use of LCLFs to meet emissions intensity thresholds corresponding to green criteria after the sunset date.

C. Technical Screening Criteria

Road Transport

I1. Road Passenger Transport – Motorbikes, Cars and Light Commercial Vehicles

Includes purchase, financing, renting, leasing and operation of vehicles designated as category C1.1, C1.2, C1.3 and V1.1 under the scope of Austroads report AP-R264-05.

Sector	Transport
Activity	Road Passenger Transport
Associated ANZSIC codes	4621 Interurban and Rural Bus Transport 4623 Taxi and other Road Transport 6611 Passenger Car Rental and Hiring 6619 Other Motor Vehicle and Transport Equipment Rental and Hiring
Objective	Climate Change Mitigation
	Technical screening criteria
Green	Purchase, financing, renting, leasing and operation of electric vehicles.

I2. Road Passenger Bus Transport

Purchase, financing, leasing, rental and operation of urban and suburban transport vehicles for passengers and road passenger transport.

For motor vehicles, operation of vehicles designated as category Bu1, Bu2 and Bu3 under the scope of Austroads report AP-R264-05

This includes urban and interurban transportation.

Sector	Transport
Activity	Road Passenger Bus Transport
Associated ANZSIC codes	4621 Interurban and Rural Bus Transport 4622 Urban Bus Transport 6611 Passenger Car Rental and Hiring 6619 Other Motor Vehicle and Transport Equipment Rental and Hiring
Objective	Climate Change Mitigation
	Technical screening criteria
Green	Purchase, financing, renting, leasing and operation of zero tailpipe emissions vehicles.

I3. Micromobility

Includes the selling, purchasing, financing, leasing, renting and operation of personal mobility or transport devices where the propulsion comes from the physical activity of the user, from a zero-emissions motor, or a mix of zero-emissions motor and physical activity. This includes the provision of freight transport services by (cargo) bicycles.

This activity refers to lightweight devices driven by users personally. Usually includes bicycles, e-bikes, skateboards.

Sector	Transport
Activity	Micromobility
Associated ANZSIC codes	4623 Taxi and other Road Transport 6639 Other Goods and Equipment Rental and Hiring
Objective	Climate Change Mitigation
	Technical screening criteria
Green	Purchase, financing, renting, leasing and operation of personal mobility devices where the propulsion comes from the physical activity of the user, from a zero-emissions motor, or a mix of zero-emissions motor and physical activity.

I4. Road Freight Transport – Rigid Vehicles

Purchase, financing, leasing, rental and operation of vehicles designated as category 11, 12,12 under the scope of Austroads report AP-R264-05.

Heavy trucks and articulated vehicles are harder to abate. The green criteria include electric and hydrogen vehicles, and the use of LCLFs provided that the emission intensity thresholds are met. Measures that (a) enable the vehicles to run on LCLF, and (b) improve the supply chain and availability of biofuels are also eligible until the stated sunset date.

Sector	Transport
Activity	Road Freight Transport – Rigid Vehicles
Associated ANZSIC codes	4610 Road Freight Transport 5101 Postal Services 5102 Courier Pick-up and Delivery Services 6619 Other Motor Vehicle and Transport Equipment Rental and Hiring
Objective	Climate Change Mitigation
	Technical screening criteria
Green	The activity must comply with one of the criteria A or B, and criteria C and D: A. Zero tailpipe emissions vehicles B. Vehicles meet the following emissions intensity trajectory: C. Where LCLF is used, it must meet the green criteria for the manufacture of low-carbon liquid fuels in the Manufacturing and Industry sector of the taxonomy. D. Vehicles are not dedicated to fossil fuel transport
Decarbonisation measures	• **Until December 2039** acquisition or retrofitting of vehicles are able to run on LCLF and / or; • **Until December 2039**, Purchase/use and/or measures improving supply chain and availability of LCLFs.
Notes	Emissions intensity figures and trajectory based on Climateworks Centre's (2024) 1.5°C scenario for rigid vehicles.

Year	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
g CO_2e/t-km	243	207	135	60	6	0

I5. Road Freight Transport – Articulated Vehicles

Purchase, financing, renting, leasing and operation of vehicles designated as category 11S1, 11S2, 12S1, 12S2, 12S3 under under the scope of Austroads report AP-R264-05.

<table>
<tr><td>Sector</td><td>Transport</td></tr>
<tr><td>Activity</td><td>Road Freight Transport – Articulated Vehicles</td></tr>
<tr><td>Associated ANZSIC codes</td><td>4610 Road Freight Transport
5101 Postal Services
5102 Courier Pick-up and Delivery Services
6619 Other Motor Vehicle and Transport Equipment Rental and Hiring</td></tr>
<tr><td>Objective</td><td>Climate Change Mitigation</td></tr>
<tr><td></td><td></td></tr>
<tr><td></td><td>Technical screening criteria</td></tr>
<tr><td>Green</td><td>The activity must comply with one of the criteria A or B, and criteria C and D:
A. Zero tailpipe emissions vehicles;
B. Vehicles meet the following emission intensity trajectory.
<table><tr><td>Year</td><td>2025</td><td>2030</td><td>2035</td><td>2040</td><td>2045</td><td>2050</td></tr><tr><td>g CO_2e/t-km</td><td>50</td><td>47</td><td>28</td><td>12</td><td>1</td><td>0</td></tr></table>C. Where LCLF is used, it must meet the green criteria for the manufacture of low-carbon liquid fuels in the Manufacturing and Industry sector of the taxonomy.
D. Vehicles are not dedicated to fossil fuel transport</td></tr>
<tr><td>Decarbonisation measures</td><td>• Until December 2039, acquisition or retrofitting of vehicles to be able to run on LCLF and/or;
• Until December 2039, Purchase/use and/or measures improving supply chain and availability of LCLFs.</td></tr>
<tr><td>Notes</td><td>Emissions intensity figures and trajectory based on Climateworks Centre's (2024) 1.5°C scenario for articulated vehicles.</td></tr>
</table>

Air Transport

I6. Passenger and Freight Air Transport

The IEA recognises that aviation will, on current projections, have residual emissions by 2050 even with the implementation of Sustainable Aviation Fuels (SAF) and zero direct (tailpipe) emissions aircrafts, a conclusion also reached by the Australian government's Aviation White Paper.

While other hard-to-abate transport sub-sectors including road freight, rail and shipping transport criteria adopt emission intensity thresholds, the air transport criteria instead utilises a percent SAF blend trajectory. The rationale for this is the overwhelming reliance of air transport decarbonisation on SAF, and usability and interoperability with other taxonomies which adopt a SAF blend blend in the criteria.

Sector	Transport
Activity	Passenger and Freight Air Transport
Associated ANZSIC codes	4900 Air and Space Transport 6119 Other Motor Vehicle and Transport Equipment Rental and Hiring
Objective	Climate Change Mitigation
	Technical screening criteria
Green	The activity must comply with one of the following criteria A or B, and criteria C and D. A. Zero direct (tailpipe) emissions aircrafts B. Aircrafts using SAF must meet the %SAF in total fuel blending trajectory: **Year** | **2025** | **2030** | **2035** | **2040** | **2045** | **2050** %SAF blend | 5 | 10 | 20 | 43 | 67 | 90 C. SAF must meet the green criteria for the Manufacture of LCLFs in the Manufacturing and Industry sector of the taxonomy. D. Aircrafts are not dedicated to fossil fuel transport
Decarbonisation measures	• Acquisition or retrofitting of aircrafts to be able to take up to 90 % SAF, and/or • Purchase/use and/or measures improving supply chain and availability of SAF
Notes	SAF percentage-blend rates based on the domestic blend rates proposed in the Australian Government's (2024) Aviation White Paper.

I7. Air Transport Ground Handling Operations

This activity includes the manufacture, repair, maintenance, overhaul, retrofitting, design, repurposing and upgrade, purchase, financing, renting, leasing and operation of equipment and service activities covering zero emissions ground handling operations, including ground services activities at airports, and cargo handling, including loading and unloading of goods from aircraft.

Sector	Transport
Activity	Air Transport Ground Handling Operations
Associated ANZSIC codes	5220 Airport Operations and Other Air Transport Support Services 5291 Customs Agency Services 5292 Freight Forwarding Services 5299 Other Transport Support Services n.e.c.
Objective	Climate Change Mitigation
	Technical screening criteria
Green	Purchase, leasing and/or operation of zero tailpipe emissions vehicles.

I8. Urban and Suburban Passenger Rail Transport

Sector	Transport
Activity	Urban and Suburban Passenger Rail Transport
Associated ANZSIC codes	4720 Rail Passenger Transport 4622 Urban Bus Transport (including Tramway) 6619 Other Motor Vehicle and Transport Equipment Rental and Hiring
Objective	Climate Change Mitigation
	Technical screening criteria
Green	The activity must meet criteria A and B: A. Purchase/operation of zero direct (tailpipe) emissions rolling stock B. Rolling stock are not dedicated to the transport of fossil fuels

I9. Interurban Passenger Rail Transport

Purchase, financing, rental, leasing and operation of passenger transport using railway rolling stock on mainline networks.

Sector	Transport
Activity	Interurban Passenger Rail Transport
Associated ANZSIC codes	4720 Rail Passenger Transport 6119 Other Motor Vehicle and Transport Equipment Rental and Hiring
Objective	Climate Change Mitigation
	Technical screening criteria
Green	The activity must comply with criteria A or B, and criteria C and D: A. Zero direct (tailpipe) emissions rolling stock B. Fleet/rolling stock meet the following emissions intensity trajectory. C. Where LCLF is used, it must meet the green criteria for the manufacture of low-carbon liquid fuels in the Manufacturing and Industry sector of the taxonomy. D. Rolling stock is not dedicated to fossil fuel transport
Decarbonisation measures	• **Until 31 December 2039**, acquisition or retrofitting of rolling stocks to be able to run on LCLF and/or; • **Until 31 December 2039**, Purchase/use and/or measures improving supply chain and availability of LCLF
Notes	Emissions intensity figures and trajectory based on Climateworks Centre's (2024) 1.5°C scenario for passenger rail transport.

Year	2025	2030	2035	2040	2045	2050
g CO_2e/p-km	36	32	32	17	3	0

I10. Freight Rail Transport

Purchase, financing, leasing, rental and operation of freight transport on mainline rail networks as well as short line freight railroads.

Sector	Transport
Activity	Freight Rail Transport
Associated ANZSIC codes	4710 Rail Freight Transport 6119 Other Motor Vehicle and Transport Equipment Rental and Hiring
Objective	Climate Change Mitigation
	Technical screening criteria
Green	The activity must comply with criteria A or B, and criteria C and D: A. Zero direct (tailpipe) emissions rolling stock B. Fleet/rolling stock meet the following emissions intensity trajectory. Year: 2025 | 2030 | 2035 | 2040 | 2045 | 2050 g CO_2e/t-km: 6 | 5 | 3 | 0 | 0 | 0 C. Where LCLF is used, it must meet the green criteria for the manufacture of low-carbon liquid fuels in the Manufacturing and Industry sector of the taxonomy. D. Rolling stock is not dedicated to fossil fuel transport
Decarbonisation measures	• **Until December 2039**, acquisition or retrofitting of rolling stocks to be able to run on LCLF, and/or, • **Until December 2039**, Purchase/use and/or measures improving supply chain and availability of LCLF
Notes	Emissions intensity figures and trajectory based on Climateworks Centre's (2024) 1.5°C scenario for freight rail transport.

I11. Inland Passenger and Freight Water Transport

Purchase, financing, leasing, rental and operation of passenger and freight vessels on inland waters, involving vessels that are not suitable for sea transport.

Sector	Transport
Activity	Inland Passenger and Freight Water Transport
Associated ANZSIC codes	4810 Water Freight Transport 4820 Water Passenger Transport 6619 Other Motor Vehicle and Transport Equipment Rental and Hiring
Objective	Climate Change Mitigation
	Technical screening criteria
Green	Purchase, operation and/or leasing of zero direct (tailpipe) emissions vessels.

I12. Maritime Passenger and Freight Water Transport

While water transport is the lowest source of emissions in the Australian domestic transport sector, long-range vessels present an opportunity to be decarbonised using LCLF. Transition measures have been informed by IMO guidelines.

Purchase, financing, chartering (with or without crew) and operation of vessels designed and equipped for transport of freight or for the combined transport of freight and passengers on sea or coastal waters, whether scheduled or not.

Sector	Transport
Activity	Maritime Passenger and Freight Water Transport
Associated ANZSIC codes	4810 Water Freight Transport 4820 Water Passenger Transport 6619 Other Motor Vehicle and Transport Equipment Rental and Hiring
Objective	Climate Change Mitigation

Technical screening criteria

Green

The activity complies with either criteria A or B, and criteria C and D:

A. Vessel has zero direct (tailpipe) emissions; with emphasis on tank-to-wake emissions and taking into account IMO's guidelines on lifecycle analysis of fuels;
B. Fleet/vessels meet the following emission intensity thresholds (in g CO_2e/t-nm) for different type of vessels in the table below:

Emission intensity thresholds for shipping in g CO_2e/t-nm

Type	Size	2020 EEOI/AER	2030 EEOI/AER	2040 EEOI/AER	2050
Bulk carrier	0-9999 DWT	35.1/24.6	23.4/16.4	11.7/8.2	0
Bulk carrier	10000-34999 DWT	12.6/6.6	8.1/4.4	4.1/2.2	0
Bulk carrier	35000-59999 DWT	9.2/4.6	6.2/3.1	3.1/1.5	0
Bulk carrier	60000-99999 DWT	8.4/3.6	5.6/2.4	2.8/1.2	0
Bulk carrier	100000 - 199999 DWT	4.6/2.4	3.1/1.6	1.5/0.8	0
Bulk carrier	200000 - + DWT	4.1/2.3	2.7/1.5	1.4/0.8	0
Chemical tanker	0 - 4999 DWT	40.3/35.4	26.8/23.6	13.4/11.8	0
Chemical tanker	5000 - 9999 DWT	26.6/19	17.7/12.7	8.9/6.3	0
Chemical tanker	10000 - 19999 DWT	18.7/11.9	12.5/7.9	6.2/4	0
Chemical tanker	20000 - + DWT	12.3/6.5	8.2/4.3	4.1/2.2	0
Container	0 - 999 TEU	27.3/16.9	18.2/11.3	9.1/5.6	0
Container	1000 - 1999 TEU	24.9/14.8	16.6/9.9	8.3/4.9	0
Container	2000 - 2999 TEU	19.5/10	13/6.7	6.5/3.3	0
Container	3000 -4999 TEU	16.8/8.3	11.2/5.5	5.6/2.8	0
Container	5000 - 7999 TEU	16.2/7.8	10.8/5.2	5.4/2.6	0
Container	8000 - 11999 TEU	14.1/6.7	9.4/4.5	4.7/2.2	0
Container	12000 - 14500 TEU	10.4/4.6	6.9/3.1	3.5/1.5	0
Container	14500 - + TEU	10.4/4.6	6.9/3.1	3.5/1.5	0
General cargo	0 - 4999 DWT	30.2/24.2	20.1/16.1	10.1/8.1	0
General cargo	5000 - 9999 DWT	27.2/16.7	18.2/11.1	9.1/5.6	0
General cargo	10000 - + DWT	24.2/13.1	16.2/8.8	8.1/4.4	0
Other liquid tanker	0 - + DWT	106.6/97.6	71.1/65.1	35.5/32.5	0
Ferry-pax only*	0 - 1999 GT	1272135.8	848090.5	424045.3	0
Ferry-pax only*	2000 - + GT	1740606.6	1160404.4	580202.2	0
Cruise*	0 - 1999 GT	2044403.4	1362935.6	681467.8	0
Cruise*	2000 - 9999 GT	1286641.3	857760.8	428880.4	0
Cruise*	10000 - 59999 GT	1495064.7	996709.8	498354.9	0
Cruise*	60000 - 99999 GT	1738613.6	1159075.5	579537.9	0
Cruise*	100000 - + GT	1337274.9	891516.6	445758.3	0
Ferry-RoPax*	0 - 1999 GT	822123.9	548082.6	274041.3	0
Ferry-RoPax*	2000 - + GT	1137003.8	758002.5	379001.3	0
Refigerated bulk	0 - 1999 DWT	72.8/48.7	48.5/32.5	24.3/16.2	0
Ro-Ro	0 - 4999 GT	258.2/212.4	172.1/141.6	86.1/70.8	0
Ro-Ro	0 - 4999 GT	63.9/45.9	42.6/30.6	21.3/15.3	0
Vehicle	0 - 3999 Vehicles	124.7/46	83.2/30.7	41.6/15.3	0
Vehicle	4000 - + Vehicles	58.1/13.8	38.7/9.2	19.4/4.6	0

Green	*For Ferry-pax only, Cruise, and Ferry-RoPax, the emissions intensity unit is g CO_2e/Gt-nm DWT – Dead Weight Tonnes (the weight of the cargo) TEU – Twenty-foot Equivalent Unit GT – Gross Tonnage C. Where LCLF (including Ammonia) is used, it must meet the green criteria for the manufacture of low-carbon liquid fuels in the Manufacturing and Industry sector of the taxonomy. D. Vessels are not dedicated to fossil fuel transport
Decarbonisation Measures	• Retrofitting measures (fuel shift or improving energy efficiency) attaining 20% Energy Efficiency Design Index (EEDI) value equivalent to reducing the EEDI reference line by at least below the EEDI requirements applicable on 1 April 2022
Notes	Green criteria based on analysis developed by Climate Bonds Initiative (2020).

I13. Vessels for Port Operations

Purchase, financing, renting and operation of vessels required for port operations and auxiliary activities, such as tugboats, mooring vessels, pilot vessels, salvage vessels and ice-breakers.

Sector	Transport
Activity	Vessels fort Port Operations
Associated ANZSIC codes	5212 Port and Water Transport Terminal Operations 5219 Other Water Transport Support Services 6619 Other Motor Vehicle and Transport Equipment Rental and Hiring
Objective	Climate Change Mitigation
	Technical screening criteria
Green	Purchase, operation and/or leasing of electric vessels

Enabling Infrastructure

The transport modes covered in the criteria will require the support of infrastructure to scale. This includes electric charging infrastructure, green H_2 pipelines and refuelling stations, and LCLF production, distribution and fuelling stations, among other elements. But a credible plan to decarbonise the transport sector should go beyond electric vehicles and zero emissions fuels. This means incorporating a suite of decarbonisation solutions beyond transitioning to electric vehicles, including practices to avoid or reduce the level of transport activity and shift to lower-emissions modes of transport – e.g. freight road transport to freight rail, and passenger vehicles to public and active transport.

Enabling infrastructure activities can inform the implementation of such measures.

I14. Low-carbon Road Transport Infrastructure

Construction, modernisation, maintenance and operation of infrastructure to support low carbon road transport.

Sector	Transport
Activity	Low-carbon Road Transport Infrastructure
Associated ANZSIC codes	3101 Road and Bridge Construction 3109 Other Heavy and Civil Engineering Construction 6921 Architectural Services 6922 Surveying and Mapping Services 6923 Engineering Design and Engineering Consulting Services 6924 Other Specialized Design Services 6925 Scientific Testing and Analysis Services
Objective	Climate Change Mitigation
	Technical screening criteria
Green	Eligible infrastructure includes: • Electric Vehicle (EV) charging solutions (e.g. EV charging points, swap stations, cabinets etc.) which could include, but is not limited to: — *Electricity grid connection upgrades necessary to support the deployment and operation of infrastructure for charging an EV;* — *all other solutions related to optimising and/or providing the necessary electrical capacity to support the deployment and operation of EV charging solutions;* • Hydrogen fuelling stations. • Electric Road Systems (ERS) • Infrastructure and installations that principally facilitate transshipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods. • Infrastructure, installations, and related facilities that principally facilitate urban and suburban public passenger transport, including associated signaling systems for metro, tram and rail systems

I15. Micromobility Infrastructure

Construction, modernisation, maintenance and operation of infrastructure for personal mobility.

Sector	Transport
Activity	Micromobility Infrastructure
Associated ANZSIC codes	3101 Road and Bridge Construction 3109 Other Heavy and Civil Engineering Construction 6921 Architectural Services 6922 Surveying and Mapping Services 6923 Engineering Design and Engineering Consulting Services 6924 Other Specialized Design Services 6925 Scientific Testing and Analysis Services
Objective	Climate Change Mitigation
	Technical screening criteria
Green	Eligible infrastructure includes: • Pavements, bike lanes and pedestrian zones, parking provisions for active mobility modes, electrical charging and hydrogen refueling installations for personal mobility devices.

I16. Low-carbon Public Transport Infrastructure

Construction, modernisation, operation and maintenance of infrastructure to support and enable low carbon public transport systems.

Sector	Transport
Activity	Low-carbon Public Transport Infrastructure
Associated ANZSIC codes	3101 Road and Bridge Construction 3109 Other Heavy and Civil Engineering Construction 6921 Architectural Services 6922 Surveying and Mapping Services 6923 Engineering Design and Engineering Consulting Services 6924 Other Specialized Design Services 6925 Scientific Testing and Analysis Services
Objective	Climate Change Mitigation
	Technical screening criteria
Green	Eligible infrastructure includes: • Infrastructure related to build and improvement of public transit corridors (metro lines, bus transit corridors…) • Infrastructure dedicated to support and enable zero-emission public transport including but not limited to: electric charging points, electricity grid upgrades, hydrogen and other LCLF refueling stations, resource circularity, renewable energy • Infrastructure and installations dedicated to trans-shipping passenger between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of passengers. • Infrastructure, installations, and related facilities that principally facilitate urban and suburban public passenger transport, including associated signaling systems for metro, tram and rail systems

I17. Low-carbon Air Transport Infrastructure

Construction, modernisation, maintenance and operation of infrastructure that is required to support low carbon aviation.

Sector	Transport
Activity	Low-carbon Air Transport Infrastructure
Associated ANZSIC codes	3109 Other Heavy and Civil Engineering Construction
Objective	Climate Change Mitigation
	Technical screening criteria
Green	Eligible infrastructure includes: • Infrastructure dedicated to the provision of fixed electrical ground power and preconditioned air to stationary aircraft, as well as electrical charging and hydrogen refueling for aircraft and ground handling vehicles and equipment at the airport. • Infrastructure dedicated to support and enable zero-emission aviation including but not limited to: electric charging points, electricity grid upgrades, hydrogen refueling stations, resource circularity, renewable energy, optimize energy and systems efficiency to reduce emissions from airport's own operations. • Air traffic management infrastructure / processes / activities dedicated to enable zero-emission aviation

I18. Low-carbon Rail Transport Infrastructure

Construction, modernisation, operation and maintenance of railways and subways as well as bridges and tunnels, stations, terminals, rail service facilities and other related infrastructure to support low carbon rail transport.

Sector	Transport
Activity	Low-carbon Rail Transport Infrastructure
Associated ANZSIC codes	3101 Road and Bridge Construction 3109 Other Heavy and Civil Engineering Construction 6921 Architectural Services 6922 Surveying and Mapping Services 6923 Engineering Design and Engineering Consulting Services 6924 Other Specialized Design Services 6925 Scientific Testing and Analysis Services
Objective	Climate Change Mitigation
	Technical screening criteria
Green	Eligible infrastructure includes: • For electrified trackside, infrastructure and associated subsystems: infrastructure, installations and related facilities, energy, on-board control-command and signaling, and trackside control-command and signaling subsystems. • Hydrogen fuelling stations. • For new and existing trackside, infrastructure and associated subsystems where there is a plan for electrification as regards line tracks, and, to the extent necessary for electric train operations, as regards sidings, or where the infrastructure will be fit for use by zero tailpipe CO_2 emission trains within 10 years from the beginning of the activity: infrastructure, energy, on-board control-command and signaling, and trackside control-command and signaling subsystems. • Terminal infrastructure and superstructures for loading, unloading and transshipment of goods. Infrastructure that facilitates the transport of fossil fuels is excluded. • Infrastructure, installations and related facilities that principally facilitate the transfer of passengers from rail to rail or from other modes to rail.

I19. Low-carbon Water Transport Infrastructure

Construction, modernisation, operation and maintenance of infrastructure that is required for zero carbon and low carbon shipping.

Sector	Transport
Activity	Low-carbon Water Transport Infrastructure
Associated ANZSIC codes	3109 Other Heavy and Civil Engineering Construction 6921 Architectural Services 6922 Surveying and Mapping Services 6923 Engineering Design and Engineering Consulting Services 6924 Other Specialized Design Services 6925 Scientific Testing and Analysis Services
Objective	Climate Change Mitigation
	Technical screening criteria
Green	Eligible infrastructure includes: • Electricity charging, hydrogen-based refueling. • Infrastructure dedicated to the provision of shore-side electrical power to vessels at berth. • Infrastructure dedicated to the performance of the port's own operations with zero direct tailpipe CO_2 emissions, e.g. from hybrid straddle carriers to electric automated rubber tyre gantry; replacement of ICE vehicles with electric alternatives. • Infrastructure and installations dedicated to transshipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods. Infrastructure that facilitates the transport of fossil fuels is excluded.

FOR CONSULTATION

24. Are the proposed TSC credible? In this context, credibility of criteria refers to whether a transparent scientific approach aligned to the Paris Agreement temperature goal was used, informed by the latest technological understanding.

25. Are the proposed TSC usable? In this context, usability of criteria refers to whether they are comparable, clear, objective and easy to understand. If not, please explain how they could be improved.

26. Do you agree with the inclusion of the decarbonisation measures for hard-to-abate activities, and the sunset dates? Where providing recommendations, please provide evidence.

27. Does the proposed Sustainable Aviation Fuel blend for air transport adequately balance usability and credibility? Where providing recommendations, please provide evidence.

28. Please provide any further feedback on specific activities here and provide evidence to support any recommendations

11. Do No Significant Harm

The Australian taxonomy's Do No Significant Harm (DNSH) framework is designed to ensure an economic activity that makes a substantial contribution to climate change mitigation does not cause significant harm to the taxonomy's other environmental objectives:

A. Climate change adaptation and resilience

B. Biodiversity and ecosystem protection

C. Sustainable use and protection of water resources

D. Pollution prevention and control

E. Transition to a circular economy

DNSH criteria apply at an activity level and consider impacts (potential and actual) throughout the lifecycle of an asset, activity or project. They represent compliance with environmental laws, regulations and standards in Australia and are aligned with key international benchmarks recognised by global capital markets, including the Equator Principles and the IFC Performance Standards on Environmental Sustainability.

The DNSH framework consists of generic and specific criteria.

- Generic DNSH criteria are principles-based and defined for each environmental objective.
- Specific DNSH criteria detail particular requirements for different sectors and activities based on the material impacts of the sector and/or activity that are not covered by the generic criteria.

Whether generic and/or specific DNSH criteria apply to an activity will depend on the activity in question.

Following the approach recommended by the UK Green Technical Advisory Group (UK GTAG) in its 2023 report on the usability of DNSH criteria in the EU Taxonomy Regulation, the Australian taxonomy's DNSH criteria have been informed by the following design considerations:

- be broadly interoperable with key reference taxonomies by using the 'adopt some and revise some' approach;
- prioritise a principles-based approach to developing generic criteria;
- prioritise a quantitative approach to developing specific DNSH criteria, with clear threshold/process-based criteria that can be objectively measured;
- follow a consistent style to increase clarity and usability; and
- minimise subjective language and qualitative criteria (UK GTAG, 2023).

More information on the methodology for developing the taxonomy's DNSH criteria can be found in ASFI's methodology report here.

The taxonomy's generic DNSH criteria are set out below. Guidance for applying the generic DNSH criteria is provided in Appendix 5.1. The specific DNSH criteria for all sectors and activities are provided in Appendix 5.2.

FOR CONSULTATION

29. Are the proposed generic DNSH criteria aligned to Australian environmental laws and regulations and relevant international standards and practices? If your answer is no, please provide suggestions on how they could be improved.

30. Are the proposed specific DNSH criteria aligned to Australian environmental laws and regulations, relevant international standards and industry best practice? If your answer is no, please provide suggestions on how they could be improved.

31. Are the proposed generic DNSH criteria and guidance clear, relevant and usable? If your answer is no, please provide suggestions on how they could be improved.

32. The generic DNSH criteria for circular economy go beyond existing regulatory requirements in Australia and have been framed around best efforts compliance accordingly. Does this approach give rise to any additional usability challenges, particularly in relation to demonstrating compliance? If so, how could their usability be improved?

33. Are the proposed specific DNSH criteria clear, relevant and usable? If your answer is no, please provide suggestions on how they could be improved.

34. Is there any other feedback you would like to provide on the proposed DNSH framework?

Generic Do No Significant Harm criteria

Climate change adaptation and resilience

DRAFT CRITERIA	DESCRIPTION
1. Climate-related physical risks are identified and managed	Material climate-related physical risks to the activity are identified and the potential impact(s) of those risks are managed.
1.1.	The activity integrates physical and non-physical adaptation efforts aimed at managing all material climate-related physical risks to the activity that are identified from **Annex I** through a physical climate risk assessment (CRA). • For existing activities, the implementation of those physical and non-physical adaptation efforts may be phased and executed over a period of up to five years. • For new activities, implementation of those adaptation efforts must be met at the time of design and construction.
1.2.	The CRA has the following characteristics: • considers current weather variability and future climate change, including uncertainty; • is based on robust analysis of available climate data and projections across at least two relevant potential future scenarios; and • is consistent with the expected lifetime of the activity as far as practicable.
2. System-level adaptation and resilience is not adversely affected	The activity and any adaptation efforts identified to manage the potential impacts of material physical risks to the activity safeguard against maladaptation and do not adversely affect wider system-level adaptation and resilience.
2.1.	The activity and any adaptation efforts identified do not impede local, sectoral, regional and/or national adaptation strategies and plans. Consideration has been given to the viability of 'Green', 'Blue' or Nature-based Solutions over 'grey' measures to address adaptation.

Biodiversity and ecosystem protection

DRAFT CRITERIA	DESCRIPTION
1. Biodiversity and ecosystem-related risks and impacts are identified, assessed, managed and monitored	Significant biodiversity and ecosystem-related risks and potential impacts associated with the activity are identified, assessed, managed and monitored to eliminate or mitigate the negative effects of the activity on biodiversity and ecosystems.
1.1.	For new activities or where an activity results in a material expansion, an environmental impact assessment (EIA)[2] has been conducted in accordance with applicable laws or relevant international standards. • Whether an EIA is required is determined on a case-by-case-basis using the screening guidance provided in **Annex II**. • The EIA covers the identification of significant biodiversity and ecosystem-related risks and impacts posed by the activity, and measures to avoid, mitigate or manage those risks and impacts in accordance with applicable laws or relevant international standards provided in **Annex III**. • For sites or operations located in or near to biodiversity-sensitive areas outside of Australia (including UNESCO Natural and Mixed World Heritage sites and Key Biodiversity Areas), an appropriate assessment has been conducted in line with international standards (for example, IFC Performance Standard 6: Biodiversity Conservation and the Sustainable Management of Living Natural Resources).
1.2.	A management or action plan is in place that ensures appropriate mitigation, compensation and monitoring, reporting and verification measures are implemented in accordance with applicable laws or the international standards provided in **Annex IV**.

2 'Environmental impact assessment' includes Environmental Impact Assessment; Environmental and Social Impact Assessment; Environmental, Social and Health Impact Assessment and equivalent assessments.

Sustainable use and protection of water resources

DRAFT CRITERIA	DESCRIPTION
1. Water-related risks and impacts are identified, assessed, managed and monitored	Material risks and potential impacts associated with the activity related to water consumption and quality are identified, assessed, managed and monitored to avoid causing water stress and eliminate or mitigate the negative effects of the activity on water quality and aquatic ecosystems, including groundwater and riparian zones.
1.1.	For new activities or where an activity results in a material expansion, an environmental impact assessment (EIA) has been conducted in accordance with applicable laws or relevant international standards. • Whether an EIA is required is determined on a case-by-case basis using the screening guidance provided in **Annex II**. • The EIA covers the identification of significant water-related environmental risks and impacts posed by the activity, and measures to avoid, mitigate or manage those risks and impacts in accordance with applicable laws or relevant international standards provided in **Annex III.**
1.2.	Where required, a water licence, permit or equivalent water entitlement is issued in accordance with applicable laws, and water usage and conservation requirements and standards are complied with. A water management plan is in place that ensures risks, including downstream and catchment risks, are minimised and impacts are avoided or mitigated and monitored, verified and reported on in accordance with applicable laws or the international standards listed in **Annex V**.

Pollution prevention and control

DRAFT CRITERIA	DESCRIPTION
1. Relevant laws, regulations and standards relating to pollution are complied with	The activity does not lead to the manufacture, distribution, use or emission of harmful substances, noise, light, heat, waste or any other air, water, or soil pollution beyond levels permitted by applicable laws and regulations or outlined in relevant international standards listed in **Annex VI**.
1.1.	For new activities or where an activity results in a material expansion, an environmental impact assessment (EIA) has been conducted in accordance with applicable laws and regulations or equivalent international standards. • Whether an EIA is required is determined on a case-by-case basis using the screening guidance provided in **Annex II**. • The EIA includes an assessment of pollution-related risks and potential impacts posed by the activity and identifies measures to avoid, mitigate or manage those risks in accordance with applicable laws or relevant international standards provided in **Annex III**.
1.2.	All necessary measures are implemented in compliance with applicable laws and regulations or equivalent international standards as listed in **Annex VI** to**:** • avoid, minimise, manage and monitor pollution-related risks associated with the activity; • ensure the proper treatment and disposal of existing and future waste from the activity, including through waste management planning; and • where relevant and practicable, safely remediate or manage any contamination, including legacy contamination, caused by the activity.

Circular economy

DRAFT CRITERIA	DESCRIPTION
1. Significant risks related to the unsustainable use of materials are avoided and the activity does not result in a significant increase in waste	The activity does not pose significant risks related to the unsustainable production and consumption of materials or other natural resources; lead to significant inefficiencies in the use of materials or other natural resources; or result in significant increases in the generation, incineration or disposal of waste.
1.1.	The following actions are implemented to increase the sustainable and efficient production and consumption of materials or other natural resources where relevant and practicable: • new installations and products are designed and manufactured to be durable, repairable, reusable and/or recyclable; • a waste management plan is established to support the avoidance, recycling, reuse, and recovery of materials over the lifecycle of the activity; • product stewardship initiatives or extended producer responsibility schemes are utilised where available; and • retirement and dismantlement plans for plants and infrastructure related to the activity are developed and implemented.

12. Minimum Social Safeguards

The Australian taxonomy's Minimum Social Safeguards (MSS) framework is designed to ensure an entity seeking to demonstrate that its activities are taxonomy-aligned meets minimum corporate governance standards and adheres to a defined set of social norms in relation to human rights (including labour rights) and First Nations peoples.

Compliance with MSS is determined through an assessment of performance criteria against the taxonomy's three social pillars. These social pillars and the core topics underlying them are provided in Table 17. The MSS performance criteria for each of these social pillars are supported by indicators and guidance supported by indicators and guidance provided in Appendix 6.

TABLE 17
Australian taxonomy social pillars

Social pillars	Core topics
Corporate governance	Good corporate governance; taxation; anti-corruption and bribery; fair competition; consumer protection; community engagement
Human rights	Employment; labour and working conditions; occupational health and safety; modern slavery; procurement practices; gender equality; non-discrimination and equal opportunity
First Nations people's rights and cultural heritage	First Nations rights; First Nations cultural heritage

MSS criteria are principles-based and, in contrast to the taxonomy's TSC and DNSH criteria, defined at an entity level due to the significant usability challenges associated with activity-level disclosure.

The taxonomy's MSS criteria represent compliance with Australian laws and regulations, with additional requirements where those laws do not reflect international soft law standards and guidance widely accepted by global capital markets. In particular, like the EU Taxonomy, the MSS draw on the OECD Guidelines for Multinational Enterprises on Responsible Business Conduct (OECD MNE Guidelines) and the United Nations Guiding Principles on Business and Human Rights (UNGPs).

The UNGPs (discussed further below) are the authoritative global standard on preventing and addressing human rights harms by business. The OECD Guidelines provide recommendations on standards for responsible business conduct, which governments – including the Australian Government – have asked multinational enterprises to observe. The OECD Guidelines expressly include the expectations of the UNGPs.

More information on the methodology for identifying the taxonomy's social pillars and developing the taxonomy's MSS criteria can be found in ASFI's methodology report here.

Minimum Social Safeguards criteria

Corporate governance

Good corporate governance practices are essential for fostering transparency, accountability and ethical behaviour within an organisation. They provide a framework of rules and practices that guide decision-making processes and ensure stakeholders' interests are considered. Good corporate governance promotes a culture of integrity and compliance, reducing the risk of fraud, mismanagement, contraventions of environmental laws and breaches of human rights.

The taxonomy's corporate governance social safeguards criteria include requirements relating to bribery and corruption, taxation, fair competition and consumer privacy. They reflect Australian laws, regulations and standards and widely recognised international frameworks and guidance, including the IFC Corporate Governance methodology and the OECD Guidelines.

	Criteria
1	The entity demonstrates a commitment to implementing high quality corporate governance, including for environmental and social matters.
2	The board and/or management is qualified and adequately structured to oversee the entity's strategy, management and performance.
3	The entity's internal controls, systems and training are sufficient to support a culture of acting ethically and in compliance with relevant laws and regulations, including those related to anti-bribery and corruption; fair competition and taxation; and consumer protection.
4	The entity has policies and mechanisms in place to enable effective stakeholder engagement. **Note:** *This includes meaningful engagement with potentially affected people in relation to potential and actual impacts to human rights / First Nations rights and cultural heritage*[1]*, as discussed further below.*
5	The entity discloses whether the entity, its board or management, including the board or management of any subsidiaries, has been convicted of corruption or bribery, breach of competition law, tax evasion or tax avoidance.

Human rights

The MSS human rights criteria seek to ensure that entities can demonstrate they have the basic governance building blocks in place for effective human rights risk management, consistent with global standards and evolving stakeholder expectations. To this end the human rights social safeguards draw on two authoritative international standards on responsible business conduct: the UNGPs and the OECD Guidelines.

As noted above, the UNGPs are the authoritative global standard on preventing and addressing human rights harms by business. The UNGPs expect that businesses respect all internationally recognised human rights, regardless of their size, sector, operational context, ownership and structure (UNGP 14). Globally, the UNGPs are being integrated into a wide range of standards, laws and policies, including the EU's recently adopted Corporate Sustainability Due Diligence Directive (CSDDD). Aspects of the UNGPs have also been embedded into Australia's Modern Slavery Act 2018 (Cth), and there is growing evidence of uptake by business, investors and industry associations (Australian Human Rights Commission and the Australian Human Rights Institute University of New South Wales, 2021; UN Global Compact Network and Pillar Two, 2023).

To ensure their credibility, interoperability and usability, the MSS human rights criteria (and their supporting indicators) also seek to align with the EU Taxonomy's Minimum Safeguards, reporting standards such as the Global Reporting Initiative (GRI) and the UN Global Compact's Communication on Progress, and draw on the indicators utilised in the World Benchmarking Alliance's Corporate Human Rights Benchmark.

In line with the UNGPs and OECD Guidelines, the human rights criteria take a risk-based approach; enabling entities to focus on preventing, mitigating and addressing areas of most severe risk to people across their operations and value chain. This allows entities to focus their resources and activities. They also encourage disclosure and transparency of actual and potential adverse human rights impacts (i.e. its human rights risks and harms) with a view to continuous improvement.

	Criteria
1	The entity has a public policy commitment in place that outlines the entity's commitment to respect human rights in line with the expectations of the UNGPs.
2	The entity has a human rights due diligence process to identify, prevent, mitigate and account for how they address their actual and potential adverse human rights impacts through their operations and value chains, that is appropriate to the entity's size, circumstances and operating context.
3	The entity has processes in place to enable the remediation of adverse human rights impacts in line with expectations of the UNGPs.

First Nations rights and cultural heritage

First Nations rights and cultural heritage are given dedicated consideration in the Australian taxonomy's MSS criteria due to the unique historical, cultural, and legal contexts that distinguish First Nations peoples from other stakeholders. First Nations peoples have distinct legal rights recognised in international frameworks such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), including the right to Free, Prior, and Informed Consent.

In addition, First Nations peoples continue to face disproportionate social and economic inequalities as a result of historical injustices. Addressing these disparities requires targeted action. As unique stakeholders, they deserve a framework that recognises their rights and empowers them to play a central role in Australia's transition to a sustainable economy.

The taxonomy's First Nations social safeguards establish a baseline level of respect for First Nations rights and cultural heritage. By providing this foundation, the taxonomy prompts entities to align their practices with ethical engagement principles, creating space for continuous improvement. The criteria also account for the significant capacity building required for companies to work effectively with First Nations peoples and are designed as an achievable starting point.

The involvement of First Nations peoples in new projects can often be constrained by competing priorities and cultural responsibilities. By ensuring the First Nations social safeguards remains accessible, the taxonomy aims to ease the burden on both businesses and First Nations communities, while still encouraging businesses to progressively enhance their engagement practices over time.

First Nations rights

	Criteria
1	The entity shall seek to understand, respect and support the rights of First Nations Peoples and seek to embed respect for those rights into business practices. In ongoing consultation and collaboration with First Nations, the entity shall seek to demonstrate effective stakeholder engagement in a structured and culturally appropriate manner.
2	The entity shall seek to implement mechanisms in which to record and report on its significant, actual, material, and potential impacts on First Nations communities with cultural rights and interests on lands, waterways and sea country where the entity or its supply chain are operating.
3	The entity shall collaborate and co-design with First Nations on mechanisms that are implemented to monitor and control business activity that impacts First Nations.

First Nations cultural heritage

	Criteria
1	In ongoing consultation and collaboration with First Nations, the entity investigates, records and manages Cultural Heritage within its operations ensuring risks and impacts, potential, perceived and actual are managed and protected effectively.

FOR CONSULTATION

35. Are the proposed MSS criteria, indicators and guidance clear and usable? If your answer is no, please provide suggestions on how they could be improved.

36. Would additional guidance for SMEs on a proportionate approach to aligning with the MSS criteria and guidance be useful? If so, how should the existing guidance be modified?

37. Should the human rights criteria apply across the entity's operations and whole value chain or just the entity's operations and supply chain? Why/why not?

38. Should the taxonomy include negative indicators on human rights? For example:

    - A finding by the Australian National Contact Point for Responsible Business Conduct (AusNCP) based in the Treasure Department, that an entity has failed to engage in 'good faith' in the AusNCP's complaint process or that the entity has failed to implement recommendations made by the AusNCP to improve the entity's observance of the OECD Guidelines.
    - The entity fails to provide a response within 3 months to a request for response to a civil society allegation via the Business & Human Rights Resource Centre's (BHRRC) Company Response Mechanism.

39. How do we ensure that the MSS criteria for First Nations rights and cultural heritage does not place an additional burden on communities?

40. Should the MSS criteria for First Nations rights include an explicit reference to Free, Prior and Informed Consent? Please explain the reason for your answer.

41. How can an entity consider First Nations heritage in its practices?

42. Is there any other feedback you would like to provide on the proposed MSS framework?

Appendix 1: Overview of key Australian modelling methodologies

Prepared by Climateworks Centre for the Australian Sustainable Finance Institute, October 2024.

Climateworks Centre's Decarbonisation Scenarios 2023

Modelling methodology

Climateworks decarbonisation scenarios use AusTIMES, a partial equilibrium model, to represent the Australian economy. The objective of this model is to minimise total costs to the economy over the modelling period, whilst ensuring that Australia's energy demands, and emissions targets are met. A detailed description of the decarbonisation scenarios application of the AusTIMES model can be found here.

Carbon budget

In the decarbonisation scenarios a carbon budget is used to constrain Australia's total emissions between 2021 and 2050. These carbon budgets are derived from IPCC global budgets (IPCC, 2023), using a methodology consistent with the Nicholls and Meinshausen approach (Nicholls & Meinshausen, 2022). The aim of applying carbon budgets in this manner is to align the scenarios with limiting global temperature rise to demonstrate the rate of decarbonisation required for Australia to meet its commitments to the Paris Agreement.

Sectoral representation

Supply-side of electricity sector	AusTIMES models all of Australia's major electricity grids. Off-grid modelling is limited to particular zones in Western Australia. Existing generators are modelled including lifetime and retirement plans. Thirty-one technologies are modelled, as well as distributed generation and storage.
End-use sectors	End-use sectors are represented as: agriculture (8 subsectors), mining (11 subsectors), manufacturing (21 subsectors), other industry (5 subsectors), commercial buildings (7 building types), residential buildings (3 building types), road transport (10 vehicle segments) and non-road transport (aviation, rail and shipping).

Deriving emissions intensities

Electricity generation sector	AusTIMES calculates the total amount of electricity generated (TWh) across Australia that is required to meet future modelled demand. The model also calculates total emissions produced from the electricity sector (KtCO2e). Total emissions are divided by electricity generated in each year to provide an estimate of average carbon intensity of electricity generation.
Transport sector	Transport activity projections are based on current activity data from the Bureau of Infrastructure and Transport Research Economics (BITRE) and projections of population and economic growth, see Climateworks Transport decarbonisation scenarios technical report for further detail. Transport activity projections, fleet and vehicle data are provided as input assumptions to the model. AusTIMES calculates the total energy demand and emissions produced by each transport mode type in the sector. To estimate emissions intensity of transport modes, absolute emissions for each mode are divided by activity data provided by BITRE in each year modelled.

Comparison with other decarbonisation pathways

Climateworks decarbonisation scenarios 2023 plot two possible pathways for Australia to achieve net-zero emissions in line with the Paris Agreement. Other pathways to achieving net-zero have been published in recent years. This section briefly compares the Climateworks decarbonisation scenarios with:

- CSIRO Sector Pathways commissioned by the Climate Change Authority (CCA); and
- CSIRO's Rapid decarbonisation pathways for Australia

Modelling methodologies

The three emissions studies under consideration all use AusTIMES to represent Australia's energy system. The modelling methodologies used be each are as follows:

Pathway	Energy and emissions modelling	Macroeconomic and trade modelling and assumptions	Land based sequestration	Emissions constraints
Climateworks decarbonisation scenarios 2023	AusTIMES provides least cost energy, emissions and technology pathways	Provided as input assumptions to AusTIMES based on a variety of sources such as The Australian National Outlook 2019, and ABS projections. See AusTIMES Modelling Assumptions and Methodology for further detail	Determined on a least cost basis by AusTIMES. Cost assumptions based on DISR modelling	A carbon budget constraint for Australia was applied to AusTIMES based on the methodology of (Nicholls and Meinshausen 2022)
CSIRO/CCA Sector pathways		Determined using CSIRO's Global Trade and Environment Model (GTEM)	Land use sequestration levels informed by modelling with the Land-use trade offs model (LUTO)	A 2035 emissions reduction target and net-zero target year were set to reflect an array of emissions reduction outcomes relevant for the authority's 2035 Targets Advice. (See figure C.2 of Sector pathways Review)
CSIRO Rapid decarbonisation pathways for Australia		Determined using a combination of CSIRO's Global Trade and Environment Model (GTEM) and KPMG's Energy and Environment Model (KPMG-EE). Macroeconomic assumptions are broadly aligned with IEA economic trajectories.	Determined on a least cost basis by AusTIMES. Cost assumptions based on (CSIRO 2022)	

Scenarios

Each of the studies present two scenarios. Scenario narratives are as follows:

Pathway	Scenario	Narrative
Climateworks decarbonisation scenarios 2023	1.5°C scenario	Aligns with limiting global warming to 1.5°C (67% likelihood)
	Well-below-2C scenario	Aligns with limiting warming to 1.8°C (67% likelihood)
CSIRO/CCA Sector pathways	A40/G1.5	Has global settings where a successful international policy regime means countries take immediate action to limit warming to 1.5°C. Australia overachieves on its 2030 target and reaches net zero in 2040. This scenario applies global energy and emissions targets specified by IEA's 'Net Zero Emissions' scenario.
	A50/G2	Has global settings where a successful international policy regime means countries take immediate action to limit warming to 2°C. Australia overachieves its current 2030 target and reaches net zero in 2050.This scenario applies global energy and emissions targets specified by IEA's 'Announced Pledges Scenario'.
CSIRO Rapid decarbonisation pathways for Australia	CSIRO Rapid Decarbonisation (CRD) scenario	Based on a rapid but plausible decarbonisation pathway to net zero for Australia aligned with the IEA's NZE global 1.5°C carbon budget
	CSIRO Stated Policies (CSP) scenario	Based on stated policies internationally and within Australia, which projects a 2.6°C temperature increase by 2100

Sectoral representation

All three studies use AusTIMES to represent Australia's economy and hence have the same sectoral representation for modelling. Climateworks' decarbonisation scenarios and CSIRO's Rapid decarbonisation pathways present results using this sector breakdown. The sector pathways use a slightly different breakdown of sectors to present the pathways, detailed in Table B.2 of the Sector Pathways Review Appendices.

Appendix 2: Key definitions - Agriculture and Land sector

The Australian taxonomy uses the Accountability Framework initiative (Afi) definition of "forest", "natural forest" and "agricultural use", with Australian quantitative forest thresholds used in Australia's National Greenhouse Gas Inventory.

The definitions are set out below. If there are updates to the AFi definitions, the updated definitions in the AFi prevail.

Agriculture / Agricultural use

The use of land primarily for any one or more of the following:

1. cultivation of temporary or annual crops that have a growing cycle of one year or less
2. cultivation of permanent or perennial crops that have a growing cycle of more than one year, including tree crops
3. cultivation of permanent or temporary meadows or pastures, for example by planting of non-native grasses and/or by agricultural management practices such as irrigation or fertilisation
4. raising of livestock on land characterised by severe and sustained degradation
5. buildings, animal feeding operations, and other farm infrastructure
6. temporarily fallow land

Forest

Land spanning more than 0.5 hectares with trees higher than 2 meters and a canopy cover of more than 20 percent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or other land use. Forest includes natural forests and tree plantations.

Natural Forest

A forest that is a natural ecosystem.

Natural forests possess many or most of the characteristics of a forest native to the given site, including species composition, structure, and ecological function.

Natural forests include:

- **a.** Primary forests that have not been subject to major human impacts in recent history
- **b.** Regenerated (second-growth) forests that were subject to major impacts in the past (for instance by agriculture, livestock raising, tree plantations, or intensive logging) but where attained much of the species composition, structure, and ecological function of prior or other contemporary natural ecosystems
- **c.** Managed natural forests where much of the ecosystem's composition, structure, and ecological function exist in the presence of activities such as:
  - Harvesting of timber or other forest products, including management to promote high-value species
  - Low intensity, small-scale cultivation within the forest, such as less-intensive forms of swidden agriculture in a forest mosaic.
- **d.** Forests that have been partially degraded by anthropogenic or natural causes (e.g., harvesting, fire, climate change, invasive species, or others) but where the land has not been converted to another use and where degradation does not result in the sustained reduction of tree cover below the thresholds that define a forest or sustained loss of other main elements of ecosystem composition, structure, and ecological function.

Wetland

Wetlands are areas of marsh, fen, peatland or water:

- **a.** that are either temporary or permanent; and
- **b.** which have water that can be static or flowing, fresh, brackish or salty;

and includes areas of marine water the depth of which at low tide is not more than 6 metres.

Tree Plantation

A forest predominantly composed of trees established through planting and/or deliberate seeding that lacks key elements of a natural forest native to the area, such as species composition and structural diversity.

- Tree plantations generally have one or a few tree species and tend to include one or more of the following characteristics:
  1. planted on cleared land
  2. harvested regularly
  3. trees are of even ages
  4. products from the plantation are managed and processed for commercial production
- Tree plantations can consist of trees planted for timber, pulp, non-timber forest products (eg, rubber latex), or ecosystem services (eg, soil stabilisation). Plantations dominated by agricultural species (eg, fruits or oil palm) are considered agriculture, not tree plantations.

Appendix 3: Manufacturing and Industry Technical Screening Criteria – Supporting Guidance

Appendix 3.1:Hydrogen production system boundaries and methodological notes for GHG emissions accounting

Total GHG emissions accounting

Refer to figure 1 above in the hydrogen criteria section.

E total=E1+E2+E3+E4−E5+E6+E7+E8+E9

E total: Total emissions

E1: Upstream feedstock related emissions (including sourcing, processing, transport and storage. Methane leakages must be included). Sourcing can refer to extraction, cultivation or collection depending on the feedstock.

E2: Upstream energy related emissions (including sourcing, processing, transport and storage). For hydrogen production using desalination water plants, emissions from electricity must be included in the GHG accounting

E3: Process direct emissions

E4: Emissions related to CCS energy consumption and leakages

E5: CO_2 emissions captured

E6: Conditioning emissions (Energy required to compress and purify hydrogen)

E7: Transportation emissions to the site where hydrogen will be used (energy and electricity related emissions). If the producer is responsible for transportation, it must use primary data. If transportation is done by another party, it can use secondary data from the transporter or use estimations. Emissions from transport infrastructure, such as the construction of the pipelines or ships should not be included for the purpose of these criteria.

E8: Storage of hydrogen

E9: Conversion and reconversion of hydrogen

GHG emissions up to the point of production

The life cycle assessment should follow the latest releases of ISO std (Using ISO 14067:2018, ISO 14040, ISO 14044 for life-cycle assessment. Projects located in Europe can alternatively use the methodology referred to in Article 28(5) of Directive (EU)2018/2001.

The methodology factor in a Global Warming Potential for a period of 100 years (GWP100) for methane should be 30.

For comparison purposes, emissions must be estimated to achieve a hydrogen purity of at least 99.9 %vol and an overpressure of at least 3 MPa.

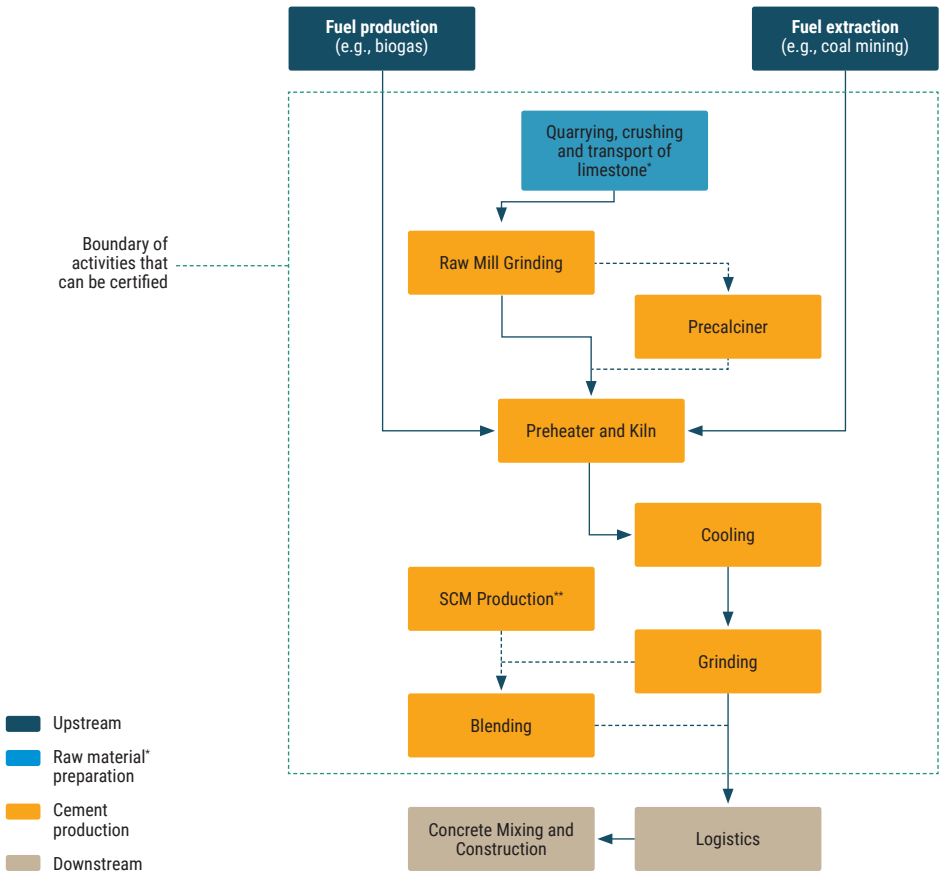
GHG emissions from hydrogen transportation

Hydrogen transportation emissions to the site where hydrogen will be used must be included. It includes energy and electricity related emissions. The life cycle assessment for hydrogen transportation and storage should follow the latest releases of ISO std (ISO 14083:2023 Quantification and reporting of greenhouse gas emissions arising from transport chain operations). When hydrogen transportation includes conversion and reconversion processes, their energy related emissions must be included.

Appendix 3.2: Hydrogen cross cutting criteria

Area	Activity	Mitigation requirements
Various		
Carbon Capture and Storage	Installation / acquisition of infrastructure related to CO_2 capture of emissions from hydrogen production.	• The minimum capture rate from process and combustion emission streams of 90%. • A quantitative performance report of the CCS operations, including the following information: — *Intended capture rate capacity, maximum capture rate capacity, intended annual capture of CO_2, transport of CO_2, and storage of CO_2.* • Demonstrated MRV (monitoring, reporting and verification), and mitigation measures for methane leaks on site and upstream. • Evidence that demonstrates the CO_2 will be suitably transported and stored in line with the Taxonomy criteria for CCS.
Carbon Capture and Utilisation	Installation / acquisition of infrastructure related to capture, transportation, and utilisation of CO2 emissions from the hydrogen production.	In addition to the criteria above for carbon capture, the following criteria for utilisation must be met: **Utilisation** • CO_2 must be used for the manufacture of durable products (e.g. polymers, construction materials stored in buildings, or recyclable products. • CO_2 is not used for products that release the CO_2 immediately when the products are used (such as in urea, carbonated beverages, or fuels) • CO_2 is not used for enhanced oil recovery, and the production of other forms of fossil energy sources.

Appendix 3.3: Cement production system boundaries and methodological notes for GHG emissions accounting



Calculating the correction factors:

The facility shall test their product following EN 197-110 and report the value. Based on the cement grade produced (or the mass-weighted average strength grade produced where multiple grades are produced by a plant), the corresponding correction factor for that class should be applied to the facility's emissions intensity for that year.

- If EN 197-1 is not used, applicants should use a corresponding nominal strength according to a locally used standard.
- Where multiple classes/grades are produced by a plant or company, the mass-weighted average strength grade produced should be used to calculate the appropriate correction factor.

Appendix 3.4: Cement cross-cutting criteria

Transportation of capture CO2 (EUT)

Transport of captured CO2 via all modes. Construction and operation of CO2 pipelines and retrofit of gas networks where the main purpose is the integration of captured CO2.

The activity should meet all of the following:

- The CO2 transported from the installation where it is captured to the injection point does not lead to CO2 leakages above 0.5 % of the mass of CO2 transported.
- The CO2 is delivered to a permanent CO2 storage site that meets the criteria for
- underground geological storage of CO2 set out in Section 5.12 of this Annex; or to other
- transport modalities, which lead to permanent CO2 storage site that meet those criteria.
- Appropriate leak detection systems are applied and a monitoring plan is in place, with the report verified by an independent third party.
- The activity may include the installation of assets that increase the flexibility and improve the management of an existing network

Criteria for the Underground permanent geological storage of CO2

Permanent storage of captured CO2 in appropriate underground geological formations.

a. Characterisation and assessment of the potential storage complex and surrounding area, or exploration is carried out to establish whether the geological formation is suitable for use as a CO2 storage site.

b. For operation of underground geological CO2 storage sites, including closure and post-closure obligations:
  (a.) appropriate leakage detection systems are implemented to prevent release during operation;
  (b.) a monitoring plan of the injection facilities, the storage complex, and, where appropriate, the surrounding environment is in place, with the regular reports checked by the competent national authority.

c. For the exploration and operation of storage sites, the activity complies with ISO 27914:2017225 for geological storage of CO2

Appendix 3.5: Steel production system boundaries and GHG accounting methodology

Scope of emissions "The Fixed System Boundary"

Note: All the information in this section is taken from the Sustainable STEEL Principles Framework (2022).

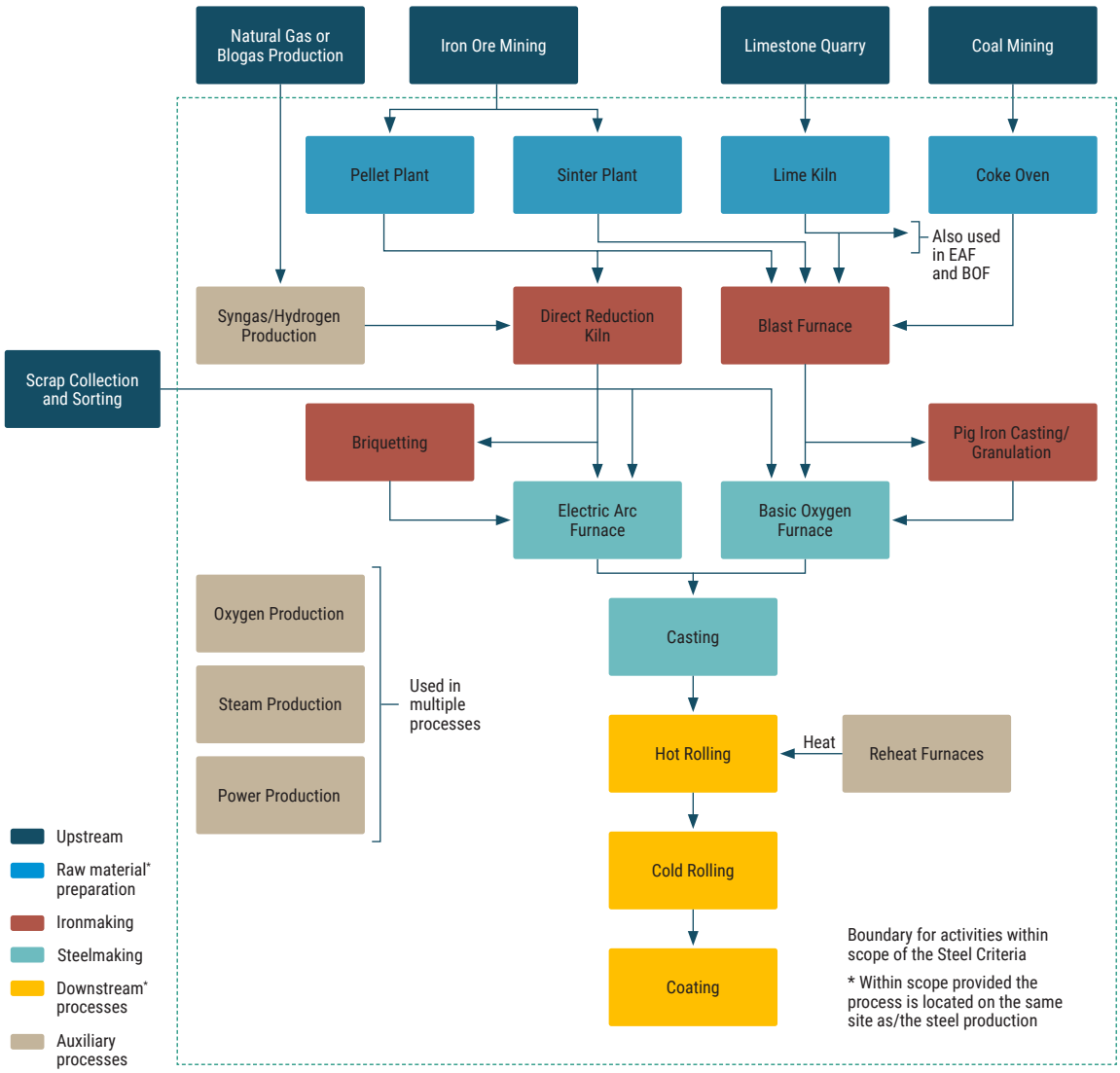
Currently, steelmakers calculate their CO2 emissions intensity according to their scope of production and in accordance with scopes 1, 2, and/or 3, as determined by the GHG Protocol. However, in the steel sector, there is a high degree of variability in the ownership structure and level of vertical integration of production facilities. This causes inconsistent emissions accounting, particularly for scope 3 and makes it difficult to compare steel companies equitably.

To ensure the emissions intensity values are comparable, the approach from the Sustainable STEEL Principles (Sustainable Steel Principles 2022), where applicants quantify their emissions intensity within a Fixed System Boundary of activities shown in figure below applies.

Within the Fixed System Boundary, Applicants are responsible for counting all emissions within the same boundary to calculate emissions intensity, irrespective of ownership of various processes and regardless of whether they are an integrated or non-integrated producer. This does not abandon the accounting standard of scopes 1, 2, and 3 as determined by the GHG Protocol; rather, it establishes a singular boundary of emissions resulting from the production of steel, regardless of whether those emissions are considered scope 1, 2, or 3 for the producer. Within this boundary lies a steelmaker's scope 1 and 2 emissions and a portion (depending on the level of vertical integration) of scope 3 emissions (specifically in the categories of purchased goods and services and processing of sold products).

FIGURE

Steel production system boundaries for GHG accounting (Sustainable Steel Principles Framework 2022, p.44)



Other considerations regarding the scope of emissions can be found in Appendix XII.1 of the Sustainable STEEL Principles (2022, p.40). Here is a list of the applicable topics:

- **Accepted standard emissions factors** are available in part 5. "Data Sources" of Appendix XII.1, these shall be used only when Primary emissions data is not available.
- **Pellet plant scope**: iron ore mining and beneficiation are not included in the Fixed System Boundary. To avoid confusion, the definition of Pellet Plant Operations, based on the European Union's Best Available Techniques reference documents (BREFs), is proposed as "any drying and grinding steps that occur after the upgrading (e.g., via magnetic separation, flotation, etc.) of the iron ore as well as feed preparation (e.g., wetting and mixing with binders), balling, induration, and screening steps to produce pellets". This is illustrated in Exhibit 15 on Appendix XII.1.
- **Credits:** Credits will only be considered for Exports of Intermediate Products outside of the Plant which are also usable in the steel supply chain (e.g., pellet, sinter, lime, and coke). Intermediate Products are all liquids and solids generated during the raw materials preparation processes and ironmaking processes listed in Appendix XII.1.
- **Electricity Emissions Factor:** for methodology and emissions factors see Appendix XII.1 (4 - Electricity Emissions Factor).

GHG emissions calculations (Sustainable Steel Principles, 2022):

$$E_{CO2} = \sum_{t=1}^{N} K_{t,d,CO2} \times Q_{t,d,CO2} + \sum_{t=1}^{N} K_{t,i,CO2} \times Q_{t,i,CO2} - \sum_{t=1}^{N} K_{t,c,CO2} \times Q_{t,c,CO2}$$

The calculation procedure is adapted from and expanded, based on the ISO 14404 series, which is the standard used by the steel industry to calculate emissions at the Plant level, specifically:

Where:

t (from 1 through N): refers to each fuel, energy, or other input (emissions source)

K: refers to emissions factors (see Appendix XII.1 of the Sustainable Steel Principles, 2022)

Q: refers to Plant quantity

d: direct - refers to emissions from fuel sources and electricity use occurring within a steel Plant, where the emissions factor is defined based on the carbon intensity of that fuel source/electricity generation

i: indirect - refers to emissions that occur outside of a steel Plant (for example, if pellets are Imported). These emissions should be determined by the relevant producer/consumer and transferred to the steel company. Where this is not possible, average emissions factors can be used. Note that this is an expansion of the categories defined in ISO 14404 and include downstream processes (such as rolling), which may not be performed on the steelmaking Plant but need to be included to comply with the Fixed System Boundary outlined above. Transport emissions are not included.

c: refer to Credit Emissions (see definition of credits in above).

This calculation provides the overall emissions which is converted to an intensity figure by dividing by the Tons of Steel Produced:

Where Ico2 refers to carbon Emissions Intensity, Eco2 refers to total emissions; and Mtotal refers to total Tons of Steel Produced.

Appendix 3.6: Steel Cross cutting criteria

Area	Mitigation criteria
Using coal	• Using coal both as reducing agent and fuel in the steelmaking process, is only eligible for existing facilities prior to 2030. After 2030, facilities would have to use coal combined with CCUS measures that meet the Taxonomy criteria for CCS and utilisation of direct CO2 emissions from steel production is used for the manufacture of durable products and does not lead to enhanced oil recovery and the production of other forms of fossil energy sources. Projects using coal should demonstrate: — *Upstream activities: provide evidence of having in place MRV (monitoring, reporting and verification), and mitigation measures for methane leaks as per the best practice recommended.*
Biogas (from biomass, landfill sites or manure) as a feedstock	As reducing agent: only two potential sources of biomass are covered, dedicated crops are not eligible • Agricultural residues: needs to comply with the following sections of the criteria applicable for biomass sourcing set out in 'Section 3.2.2. Requirement 2: Reducing the risk of indirect land use impact' of the CBI Bioenergy criteria (CBI, n.d.). • Plantation and other wood waste: the wood plantation shall demonstrate to meet the requirements set out for "plantation forestry" of the Climate Bonds Forestry Criteria OR, Demonstration of compliance to the use of biomass as a reducing agent can also be done by showing that the product has a "Certified Steel" label from Responsible Steel.

Appendix 3.7: Nitric acid cross cutting criteria

Area	Activity	Mitigation criteria
Various		
Carbon Capture and Storage	Installation / acquisition of infrastructure related to CO_2 capture of emissions from hydrogen production.	• The minimum capture rate from process and combustion emission streams of 90%. • A quantitative performance report of the CCS operations, including the following information: — *Intended capture rate capacity, maximum capture rate capacity, intended annual capture of CO_2, transport of CO_2, and storage of CO_2.* • Demonstrated MRV (monitoring, reporting and verification), and mitigation measures for methane leaks on site and upstream. • Evidence that demonstrates the CO_2 will be suitably transported and stored in line with the Taxonomy criteria for CCS.
Carbon Capture and Utilisation	Installation / acquisition of infrastructure related to capture, transportation, and utilisation of CO2 emissions from the hydrogen production.	In addition to the criteria above for carbon capture, the following criteria for utilisation must be met: **Utilisation** • CO_2 must be used for the manufacture of durable products (e.g. polymers, construction materials stored in buildings, or recyclable products. • CO_2 is not used for products that release the CO_2 immediately when the products are used (such as in urea, carbonated beverages, or fuels) • CO_2 is not used for enhanced oil recovery, and the production of other forms of fossil energy sources.
Depending on the feedstock		
Biogas (from biomass, landfill sites or manure) as a feedstock	Production of hydrogen using biogas. Refurbishment and retrofitting of facilities to use biogas.	• When using biomass, the raw material used is derived from existing supply chains and does not require dedicated production out of arable land. Only waste and residues are eligible. Wood and other dedicated crops are not eligible. • Demonstrated MRV (monitoring, reporting and verification), and mitigation measures for methane leakages on site and upstream.

Appendix 3.8: Biomass cross cutting criteria

Biomass must comply with one of the following:

- Be certified under the RSB low indirect land use change (iLUC) optional module to demonstrate that they have low indirect land use impact; or
- Provide evidence and documentation to demonstrate that they meet low iLUC risk biomass criteria and compliance indicators under the RSB optional module, i.e.:
  - Yield increase: issuers demonstrate that source feedstock for the facility is produced through an increase in yield compared to a reference date, without any additional land conversion. The biomass that is produced above the baseline scenario is eligible.
  - Unused/degraded land: issuers demonstrate that source feedstock for the facility is produced from land that was not previously cultivated or was not considered arable land.
  - Use of waste / residues: issuers demonstrate that the raw material used is derived from existing supply chains and does not require dedicated production out of arable land Details of the RSB iLUC model can be found here: http://rsb.org/the-rsb-standard/standarddocuments/low-iluc/

Appendix 4: Construction and Buildings Technical Screening Criteria – Supporting Guidance

This section describes additional supporting guidance for the application of the screening criteria.

Fossil fuels

Where the screen criteria excludes the use of fossil fuels, the buildings, plant or equipment must not require the combustion of fossil fuels on-site for normal operations.

On-site fossil fuel combustion for standby power within a building is permissible. However, standby power generators shall not be used for peak load lopping or any purpose other than standby power (and associated testing).

No fossil fuel plant is eligible under the plant and equipment upgrade TSC.

Refrigerant GWP thresholds Drafting note: Threshold table values for Large A/C may change

The equipment covered includes all stationary plant and equipment such as air conditioning units, chillers and heat pumps and supermarket refrigeration.

Domestic-scale appliances such as fridges and freezers are excluded.

Refrigerant GWP100 values used for comparison to the published thresholds are to be IPCC AR4 (2007) values as published by the DCCEEW.

The GWP thresholds applied to the screening criteria are provided in the following table:

Type and capacity / Year	2027	2028	2029	2030	2031	2032	2033	2034	2035+
Small A/C [<10kw]	700	700	700	150	150	150	150	10	10
Medium A/C [<700kw]	700	700	500	500	150	150	150	10	10
Large A/C [>=700kW]	10	10	10	10	10	10	10	10	10
Commercial Hot Water heat pump	150	150	150	10	10	10	10	10	10
Supermarket refrigeration	10	10	10	10	10	10	10	10	10
Residential Hot Water Service	10	10	10	10	10	10	10	10	10
Residential A/C	700	700	700	700	700	150	150	10	10

The Medium A/C thresholds can be applied for Large A/C [>=700kW] in applications where regulations restrict the use of refrigerants to only those of A1 flammability.

Proxies

Approved proxies at the time of publication are scheduled in the following activity-specific guidance.

Demonstrating suitable domestic and international proxies for greater coverage of activities and building use types is a work in progress, and the list of approved proxies will be expanded progressively.

New Construction specific guidance

Energy efficiency requirements of the National Construction Code

Non-residential buildings must meet the minimum requirements of NCC BCA Volume One Section J (current edition) at the time of construction approval.

Class 2 and 4 residential buildings must meet the relevant requirements of NCC BCA Volume One Section J (current edition) at the time of construction approval.

Class 1 residential buildings must meet the relevant requirements of NCC BCA Volume Two Section H6 (current edition) at the time of construction approval.

References to the National Construction Code (NCC) within the TSC mean the current edition published by the Australian Building Codes Board no earlier than 12 months prior to the date of construction approval.

State-based variations to NCC energy efficiency requirements are only permitted where scheduled within the NCC and the underlying NCC energy efficiency standards are maintained or improved. An example of a permitted variation is the NSW variation that facilitates the use of BASIX. State-based amendments that adopt previous revisions versions of the NCC with lower energy efficiency standards are not permitted (current edition) means the NCC edition published as the current edition by the Australian Building Codes Board.

The following methods can demonstrate compliance with the requirements of ***NCC 2022 BCA Volume One Section J*** for Non-residential buildings:

- J1P1 energy use
- Deemed-to-satisfy provisions
- J1V1 verification method, without accounting for renewable energy generation*
- J1V2 verification method, without accounting for renewable energy generation*
- J1V3 verification method, without accounting for renewable energy generation*

* Renewable energy generation is to be excluded from the verification method on the NCC Section J requirements to ensure that the renewable energy is additional and the amount of renewable energy generated is not used to proportionally reduce the thermal performance of the building envelope or the energy efficiency of the installed plant and equipment.

The following methods can demonstrate compliance with ***NCC 2022 BCA Volume Two Section H6*** for class 1 residential buildings:

- H6P1 and H6P2
- H6D2 Deemed-to-satisfy Energy Rating provisions (1)(a) +(2)(a)
- H6D2 Deemed-to-satisfy Elemental Provision (1)(b) + (2)(b)
- H6V2 Verification using a reference building and H6D2 (2)(b)

The following methods can demonstrate compliance with ***NCC 2022 BCA Volume One Section J*** for class 2 and 4 residential buildings:

- J1P2 Thermal performance
- J1P3 Energy usage
- J1V5 Verification using a reference building for a Class 2 sole-occupancy unit
- J3D1 (1) Deemed-to-Satisfy Provisions

Per the NSW amendment to the NCC, residential dwellings in NSW can confirm the adequacy for Criteria A with a ***BASIX certification*** after 1 October 2023 as regulated by the NSW State Environment Planning Policy (SEPP) Sustainable Buildings 2022.

Future emissions from the onsite combustion of fossil fuels

All-electric servicing can be demonstrated by the compliance certification of the design and inclusion of requirements in construction contracts.

Buildings with a 6-star ***Green Star Buildings rating*** or 5-star registrations from 2023 onwards will be deemed to satisfy the all-electric requirement.

Residential buildings with a ***NatHERS Whole-of-home certificate*** showing electricity or solar as the only fuel type in the Predicted Whole-of-home annual impact by Appliance section. The certificate must be produced by a NatHERS accredited assessor. If the certificate contains a pool or a spa, separate confirmation of using only electricity or solar energy is also required.

Residential buildings in NSW with a ***BASIX certification*** showing only electricity or solar thermal to serve all loads and appliances satisfy the requirement.

Proxies for new construction

The following proxies confirm that all initial TSC for new construction requirements are met. Additional verification may be needed for refrigerants and embodied carbon after the sunrise date, and this will be reviewed then.

Green Star

Buildings certified with 6 star rating under the Green Star Buildings standard. 5 Star rated buildings registered after 2023 will also comply. Compliance with the above is to be confirmed in a commitment to post-construction certification from the Green Building Council of Australia.

Residential buildings certified by the Green Building Council of Australia under the ***Green Star Homes***. Buildings, Compliance with the above is to be confirmed in a commitment to post-construction certification from the Green Building Council of Australia

NatHERS Whole-of-Home

Residential buildings with a **NatHERS Whole-of-home certificate** showing electricity or solar as the only fuel type in the Predicted Whole-of-home annual impact by Appliance section. The certificate must be produced by a NatHERS accredited assessor. If the certificate contains a pool or a spa, separate confirmation of using only electricity or solar energy is also required.

BASIX

Residential buildings in NSW with a BASIX certification showing only electricity or solar thermal to serve all loads and appliances satisfy the requirement.

Acquisition and Ownership

Operating emissions and energy intensity

A building's annual operating emissions or energy must be less than the emissions intensity target relevant to the building use type.

Emissions intensity must be used for transition screening criteria

Energy intensity must be used for the green screening criteria.

Emissions or energy intensity must be measured consistently with the boundaries established for the relevant building target. The basis of measurement for each building type is described below.

Emission factors for the building's energy use are to be taken from the relevant location-based emissions factors published in the government's National Greenhouse Accounts Factors and applied to all energy consumed within the defined boundary.

Emissions factors derived from power purchase agreements, green power purchases and the like are not to be used.

Where any building use type represents less than 90 percent of the building's floor area, the building must be assessed as mixed-use. Mixed-use buildings can demonstrate qualification by comparing the total emissions or energy intensity to a target for all building uses derived by area-weighting the targets for each component of building use.

The emissions or energy intensity to be compared to the required target can be calculated from annual energy use and the floor area. The scope of energy uses and area measurement should be consistent with those described for the required targets for each building use type.

The following methods are also able to confirm emissions intensity for qualification against criteria A:

Where office uses comprise more than 90 percent of the building's uses, a ***Building Energy Efficiency Certificate*** issued under the Building Energy Efficiency Disclosure Act 2010 can be used. The value for 'Annual Emission Intensity' on page 2 of the certificate or the column titled 'CRT_Nabers_AnnualEmissionsIntensity' in the downloadable dataset must be used to compare to the required target for full fuel cycle emissions. The downloadable dataset can be accessed here: https://www.cbd.gov.au/about-cbd-program/performance-program/download-cbd-program-data ***NABERS Energy rating certificates*** issued by the NABERS administrator can be used for to confirm emissions intensity for most non-residential building types:

For Offices, the value for 'Greenhouse gas emissions without Renewable Electricity per m²' found in the NABERS web portal (https://www.nabers.gov.au/ratings/find-a-current-rating) is to be compared to the required target for full fuel cycle emissions.

For Hotels, the value for 'Greenhouse gas emissions without Renewable Electricity per room' found in the NABERS web portal (https://www.nabers.gov.au/ratings/find-a-current-rating) is to be compared to the required target for full fuel cycle emissions.

For Shopping Centres, the value for 'Greenhouse gas emissions without Renewable Electricity per m², found in the NABERS web portal (https://www.nabers.gov.au/ratings/find-a-current-rating) is to be compared to the required target for full fuel cycle emissions.

For Data Centres, the value for 'PUE' found in the NABERS web portal (https://www.nabers.gov.au/ratings/find-a-current-rating) is to be compared to the required energy intensity.

Residential buildings constructed in accordance with ***NCC 2022 BCA Volume Two Section H6***, or a ***BASIX certification*** after 1 October 2023 as regulated by the NSW State Environment Planning Policy (SEPP) Sustainable Buildings 2022 are deemed to comply with Criteria A.

Proxies for acquisition and ownership

The following proxies confirm that all Transition TSCs for ownership and acquisition are satisfied.

NABERS Energy for offices

Office Buildings with a current certified NABERS Energy rating of 5.8 stars or higher. Legacy NABERS Energy star ratings that the use of green power are not eligible.

Basis of Measurement

[Drafting note for michael - we will embed this table in the worksheet too. However, recommend it remains in the guidance so ease of access]

When screening acquisition and ownership criteria, the basis for measure and emissions boundaries are varied to suit each building type. The following table summarises the activities and building use types with acquisition and ownership screening criteria and the boundary and basis of measurement for each.

TABLE

Basis of measurement for buildings

Building Use Type	Boundary	Basis of measurement	Notes
Office	Landlord Scope 1+2 emissions	/m2 of Net Lettable Area/annum	Where landlord Scope 1+2 emission are not separately metered, a whole building target, that includes the scope 1 + 2 emissions of the building tenants can be used.
Co-located Data Centre	Landlord Scope 1+2 emissions	/MWh of billed utilisation/annum	The energy intensity used is consistent with the industry standard PUE measure.
Shopping Centre	Landlord Scope 1+2 emissions	/m2 of Gross Lettable Area Retail/annum	Where the landlords provides HVAC services to the retail tenants the target is adjusted to in proportion to the percentage of lettable area served.
Hotel	Operator Scope 1+2 emissions	/guest room/annum	Seperate targets are provided for each hotel service grade star rating. Operator Scope 1+2 emissions includes the energy consumed within the guest rooms,
Serviced apartment	Operator Scope 1+2 emissions	/apartment/annum	Operator Scope 1+2 emissions includes the energy consumed with the apartments.
Built to rent	Operator Scope 1+2 emissions	/apartment/annum	Operator Scope 1+2 emissions includes the energy consumed with the apartments.
Residential dwelling	Occupier Scope 1+2 emissions	/dwelling/annum	Seperate targets are provided for single dwelling, terrace and apartment topologies, and the number of bedrooms in each.
Supermarket	Operator scope 1+2 emissions	/m2 of retail floor area/annum	The retail floor area is the trading area of the supermarket

Renovation of existing buildings

Meet all relevant Green Screening Criteria provided for Acquisitions and Ownership TSC [Green]

The annual operating energy intensity required following the renovation must be contracted as part of the works, with post-occupancy measurement and verification requirements.

Where Heritage or similar impediments compromise the renovation works, this must be demonstrated by the building being listed on a State, Federal or International heritage register and a conservation management plan confirming that the constraints over elements that we need to be renovated to reduce emissions to a level required to align with the green criteria for the acquisition and ownership of buildings.

Where heritage of similar impediments allows a percentage reduction in energy of more than 30 percent, the baseline from which to measure the reduction is to be demonstrated from a third-party verified assessment of the building's current annual operational energy use.

The work contract must include recycling redundant components and collecting and safely destroying redundant refrigerants.

> A report from a suitably qualified professional should demonstrate the targeted annual energy requirements. The contract for the delivery of the works should be tied to the performance outcomes and provide post-contraction measurement and verification, including:
>
> - Energy operating energy requirements
> - No equipment that combusts fossil fuel for normal operation
> - Refrigerant requirements

Reduce the operational emissions of the building by more than 30 percent [Transition]

A third-party verified assessment of the building's current annual operational emissions from all operating energy use will demonstrate the baseline for reducing emissions.

Emission factors for the building's energy use are to be taken from the relevant location-based emissions factors published in the government's National Greenhouse Accounts Factors and applied to all energy consumed within the defined boundary. The same emissions factors are to be applied before and after the renovation works so the emissions savings are demonstrated to be solely related to the renovation works.

Annual operating emissions targeted following the renovation must be contracted as part of the works, with post-occupancy measurements and verification requirements.

The work contract must include recycling redundant components and collecting and safely destroying any redundant refrigerants.

> A report from a suitably qualified professional should demonstrate the targeted annual emissions-saving requirements. The contract to deliver the works should be tied to the performance outcomes and provide post-contraction measurement and verification.

Fossil fuel combustion [Transition]

The works must not include the installation of any plant or equipment that combusts fossil fuels or the maintenance, refurbishment, or other means of extending the current operating life of an existing fossil fuel combusting plant and equipment.

> The contract for the delivery of the works must confirm that no works are related to any fossil fuel combusting plant or equipment.

Refrigerant GWP [Transition]

The works must not include the installation of any plant or equipment that is charged with refrigerants above the published threshold or the maintenance, refurbishment, or other means of extending the current operating life of an existing HFC of HCFC plant and equipment.

> The contract to deliver the works must confirm that no works are related to HFC or HCFC plant or equipment.

Replacement of major plant and equipment

Energy efficiency [Green]

A third-party verified assessment of the current annual operating energy use of the equipment to be replaced will demonstrate the baseline to measure the improvement in energy efficiency resulting from the works.

The energy efficiency from replacing plant and equipment must be contracted as part of the works, with post-completion measurement and verification requirements.

The requirements should be demonstrated in the contract documents.

Fossil fuel and Refrigerant GWP [Green]

The plant and equipment to be replaced by the works can be confirmed as eligible through a condition audit report that identifies fuel sources and refrigerant charges.

The replacement equipment to be installed can be demonstrated eligible through manufacturers' published data sheets.

The work contract must include recycling redundant components and collecting and safely destroying the existing refrigerant inventory.

The requirements should be demonstrated in the contract documents.

GHG emissions [Transition]

A third-party verified assessment of the current annual operational emissions from energy use of the plant or equipment to be replaced will demonstrate the baseline for reducing emissions.

Emission factors for the plant or equipment's energy use are to be taken from the relevant location-based emissions factors published in the government's National Greenhouse Accounts Factors. The same emissions factors are to be applied before and after the renovation works so the emissions savings are demonstrated to be solely related to the replacement works.

Annual operating emissions targeted following the renovation must be contracted as part of the works, with post-occupancy measurements and verification requirements.

The work contract must include recycling redundant components and collecting and safely destroying redundant refrigerants.

A report from a suitably qualified professional should demonstrate the targeted annual emissions-saving requirements. The contract to deliver the works should be tied to the performance outcomes and provide post-contraction measurement and verification.

Fossil fuel [Transition]

The works must not include the installation of any plant or equipment that combusts fossil fuels or the maintenance, refurbishment, or other means of extending the current operating life of an existing fossil fuel combusting plant and equipment.

The contract for the delivery of the works must confirm that no works are related to any fossil fuel combusting plant or equipment.

Refrigerant GWP [Transition]

The works must not include the installation of any plant or equipment that is charged with refrigerants above the published threshold or the maintenance, refurbishment, or other means of extending the current operating life of an existing HFC of HCFC plant and equipment.

The contract to deliver the works must confirm that no works are related to HFC or HCFC charged plant or equipment.

Residential and small commercial upgrades

The activity covers the costs associated with supply and installation.

Heat Pumps

Heat pumps that generate chilled or hot water and are below the maximum scheduled GWP requirements at the time of supply are eligible.

Air, water and ground source heat pumps are eligible.

> Manufacturers' published data sheets can be used to confirm that the GWP requirements are met.

Electric vehicle charging equipment

Electric vehicle charging equipment includes chargers and dedicated infrastructure, including EV distribution boards, load management devices and dedicated distribution (cables, cable trays, conduits, etc).

Charging infrastructure for heavy vehicles, cars, bicycles, and scooters is eligible.

Induction cooktops

Domestic and commercial induction cooktops are eligible.

Rooftop solar and batteries

The installation of rooftop solar panels with or without batteries is eligible.

GEMS appliances

The requirement to limit the maximum GWP of refrigerants is a sunrise provision.

The 15th percentile of an appliance's GEMS rating is to be based on a statistical test of the full GEMS equipment database for the relevant product type no more than 18 months before the activity.

> The GEMS star rating and, where relevant, the refrigerant type may be demonstrated from the manufacturer's published data or the relevant record in the GEMS database.
>
> The following refrigerant types are used in air conditioning units found in the GEMS database in September 2024 and below the initial GWP100 threshold of 700: M50, M60, R290, and R32.

TABLE

Minimum star ratings for residential and small commercial upgrade activities (March 2024)

Product type	Minimum GEMS star rating
Clothes Dryer	9
Clothes washer	4.5
Dishwasher	4
Air conditioning (Hot climate)	4.0 cooling & 2.5 heating
Air conditioning (Mixed climate)	3.5 cooling & 3.0 heating
Air conditioning (Cold climate)	4.0 cooling & 3.5 heating

Thermal improvements

The requirements for thermal improvements are found in relevant state and federal regulations and schemes.

An example of an eligible activity is the installation of Ceiling insulation in residential buildings in the ACT, in accordance with the requirements of the Residential Tenancies Regulation 1998.

Supply of equipment for buildings

Heat Pumps

Air, water and ground source heat pumps are eligible.

The requirements for not using HFC apply without a sunrise date trigger, as manufacturers, importers and distributors are unimpeded by current market limitations.

Electric vehicle charging equipment

Electric vehicle charging equipment for buildings includes chargers and dedicated infrastructure, including EV distribution boards and load management devices.

Induction cooktops

Domestic and commercial induction cooktops are eligible.

Rooftop solar and batteries

Small-scale rooftop solar and supporting batteries capable of grid connection for load management are eligible.

GEMS appliances

GEMS energy label indexes are to be used to confirm a product in the best 15th of its type. The star rating is not used for manufacturing and supply as it has insufficient granularity.

> The 15th percentile of an appliance's GEMS energy label is to be based on a statistical test of the full GEMS equipment database for the relevant product type no more than six months before the activity is assessed.

TABLE

Minimum GEMS energy label indexes for supply of equipment activities (March 2024)

Product type	Metric	Minimum GEMS star rating
Clothes Dryer	New SRI	9.03
Clothes washer	New SRI	5.73
Dishwasher	New SRI	4.12
Air conditioner	ACOP, and AEER	4.1286, and 3.8121
Chiller	Decl. COP	6.27

Infrastructure supporting low emissions precincts

Embedded electricity networks

The embedded network may comprise all elements from the point of connection to the regulated distribution network through to the consumer meters.

On-site renewable generation is to be under common ownership with the embedded network.

The provision of 100 percent renewable energy is to be confirmed by a long-term off-take agreement for Renewable Energy Certificates from a generator or generators connected to the same distribution network and a contracted commitment. Renewable Energy Certificates are to be voluntarily retired in sufficient quantity to provide 100 percent renewable energy attributes to all electricity supplied through the embedded network.

The embedded network is to operate and provide renewable energy attributes without requiring electricity retailing to connected customers.

Central thermal energy

Central thermal energy may include all elements, including power feeds and switchgear, heat pumps and chillers, heat rejection equipment, distribution pipework and associated trenching, meters and energy transfer stations.

No HFC refrigerants are to be used, and GWP_{100} must be less than 10.

All elements are to be under common ownership.

Enabling works

Site works associated with the decommissioning of fossil fuel infrastructure in support of precinct electrification.

Appendix 5: Do No Significant Harm – Supporting Materials

5.1 Generic Do No Significant Harm Guidance

Annex I: Climate-related physical risks

The list of climate-related hazards in this table is non-exhaustive and constitutes only an indicative list of the most globally widespread hazards that, where material to the activity, should be taken into account at a minimum in a physical climate risk assessment.

Hazards of particular relevance to Australia include drought, bushfire, cyclones, storm, hail, flood, coastal erosion and sea level rise.

	TEMPERATURE-RELATED	WIND-RELATED	WATER-RELATED	SOLID MASS-RELATED
Chronic	Changes in temperature (air, freshwater, marine water) including extremes	Changing wind patterns	Changing precipitation patterns and types (rain, hail, snow/ice)	Coastal erosion, inundation and recession
	Heat stress		Precipitation or hydrological variability	Soil degradation
	Temperature variability		Ocean acidification	Soil erosion
	Permafrost thawing		Saline intrusion	Solifluction
			Sea level rise	
			Water stress	
Acute	Heatwave	Cyclone, hurricane, typhoon	Drought and changes in aridity	
	Cold wave/frost	Storm (including extratropical, convective, blizzards, dust and sandstorms)	Heavy precipitation (storm, rain, hail, snow/ice) Storm surges (due to cyclones and non-cyclone East Coast lows)	
	Bushfire, grassfire, wildfire	Tornado	Flood (coastal, estuarine, fluvial, pluvial, ground water)	
			Glacial lake outburst	

Annex II: Screening for environmental impact assessments

The following should be used to screen whether an environmental impact assessment (EIA) is required for a particular activity in Australia or another jurisdiction:

JURISDICTION	APPROACH	SCREENING REQUIREMENTS
Australia (or equivalent OECD country)	Under Australian federal, state and territory legislation, an EIA is required where a proposed activity is likely to significantly affect the environment. EIA requirements in Australia vary depending on the jurisdiction (federal, state, and territory) and type of activity. For all activities located in Australia and other OECD countries, whether an EIA is required should be determined in accordance with the applicable laws of the relevant jurisdiction(s) in force at the time the activity is undertaken.	Environmental Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) An EIA is required if a project is likely to have a significant impact on matters of national environmental significance. In Australia, these matters include: • World Heritage properties • National Heritage places • Wetlands of international importance • Threatened species and ecological communities • Migratory species • Commonwealth marine areas In addition, each state and territory has environmental planning and assessment laws that require EIAs (or Environmental Impact Statements) for all activities that are likely to have a significant impact on the environment.
International	If the activity is not located in Australia or another OECD country, an EIA must be conducted if that activity would require an EIA in Australia. The EIA should be conducted in line with the international standards set out in Annex III.	Refer to screening requirements above. The activity should be screened according to the EPBC Act and the environmental planning and assessment laws of the state of New South Wales.

Annex III: Environmental impact assessments - international standards and guidelines

The below table provides a list of internationally recognised standards and guidelines that should be used to conduct environmental impact assessments for activities located outside of Australia and other OECD countries.

GUIDANCE ON CONDUCTING ENVIRONMENTAL IMPACT ASSESSMENTS OUTSIDE AUSTRALIA AND OTHER OECD COUNTRIES			
Organisation	**Name**	**Description**	**Link**
United Nations Environment Programme (UNEP)	Guidelines for conducting integrated environmental assessments	• Provide guidance for a wide range of different types of Integrated Environmental Assessments.	UNEP Guidelines for Conducting EIA
International Financial Corporation (IFC)	Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts	• Applies to business activities with environmental and/or social risks and/or impacts. • Key objectives are to identify and evaluate environmental and social risks and impacts of the project and to adopt a mitigation hierarchy to anticipate and avoid, or where avoidance is not possible, minimize, and, where residual impacts remain, compensate/offset for risks and impacts to workers, Affected Communities, and the environment.	Performance Standards on Environmental and Social Sustainability, IFC
IFC	Environmental, Health and Safety Guidelines (EHS)	• Set of recommendations designed to help businesses and projects manage environmental and health risks effectively. • Include strategies for reducing pollution, conserving resources and minimising environmental impact; recommendations for specific industries; and performance indicators.	IFC EHShttps://www.iso.org/standard/60857.html

Annex IV: Biodiversity and ecosystem management planning - international standards and guidelines

The below table provides a list of internationally recognised standards that should be used in biodiversity and ecosystem management for activities located outside of Australia and other OECD countries.

INTERNATIONAL GUIDELINES AND STANDARDS FOR BEMP/BMP			
Organisation	**Name**	**Description**	**Link**
IFC	Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	• The requirements set out in this Performance Standard have been guided by the Convention on Biological Diversity, and its applicability is established during the environmental and social risks and impacts identification process	Performance Standards on Environmental and Social Sustainability, IFC
GRI	GRI 304: Biodiversity	• Provides specific indicators for reporting on biodiversity impacts and management.	GRI Topic Standard for Biodiversity

Annex V: Water management planning - international standards and guidelines

The below table provides a list of internationally recognised standards that should be used in water management planning for activities located outside of Australia and other OECD countries.

INTERNATIONAL GUIDELINES AND STANDARDS FOR WQMPS			
Organisation	**Name**	**Description**	**Link**
IFC	Performance Standard 3 (Resource Efficiency and Pollution Prevention)	• Addresses water resource management, including requirements for minimising water use and managing wastewater to protect water quality.	IFC Performance Standard 3
UNEP	Water Quality Monitoring and Assessment of Groundwater - Technical Guidance Document	• Describes key features of groundwater that govern its quantity, availability and chemical quality.	Water Quality Monitoring and Assessment of Groundwater - Technical Guidance Document (unep.org)
	Quality Assurance for Freshwater Quality Monitoring - Technical Guidance Document	• Provides an introduction to the key concepts and approaches that can be used in Quality Assurance and Quality Control.	Quality Assurance for Freshwater Quality Monitoring - Technical Guidance Document (unep.org)
	Introduction to Freshwater Quality Monitoring and Assessment - Technical Guidance Document	• Explains the hydrological and ecological functioning of water bodies when planning a sampling and analysis programme.	Introduction to Freshwater Quality Monitoring and Assessment - Technical Guidance Document (unep.org)
International Organization for Standardization (ISO)	ISO 14046:2014 (Water Footprint)	• Offers guidelines for assessing and reporting the water footprint of products, processes, and organisations, including impacts on water quality.	ISO 14046:2014 – Environmental management – Water footprint
	ISO 5667 Series (Water Quality – Sampling)	• Provides guidelines for the sampling of water to ensure accurate and reliable water quality data.	ISO 5667 – 1:2023 – Water quality - Sampling
GRI	GRI 303: Water and Effluents	• Includes indicators and reporting requirements related to water use, wastewater, and effluents, relevant for entities to disclose their water management practices.	GRI Topic Standard for Water and Effluents

Annex VI: Pollution prevention and control - national and international standards and guidelines

POLLUTION TYPE	INTERNATIONAL CONVENTIONS, STANDARDS AND GUIDANCE	ALIGNMENT WITH AUSTRALIAN LAWS AND REGULATIONS AND GUIDANCE
Various	IFC EHS Guidelines Final - General EHS Guidelines_APRIL 29.doc (ifc.org)	State-based EPAs.
Various	International Convention for the Prevention of Pollution from Ships (MARPOL)	Protection of the Sea (Prevention of Pollution from Ships) Act 1983 (Cth) State and territory legislation.
Air	WHO Air Quality Guidelines World Health Organization (WHO) air quality guidelines (AQGs) and estimated reference levels (RLs) — European Environment Agency (europa.eu)	National Environment Protection Measure (NEPM) for Ambient Air Quality State and territory legislation and regulations.
	GRI standards on emissions (GRI 305 – includes air pollutants like nitrogen oxides, sulphur oxides and particulate matter) and effluents and waste (GRI 306)	National Greenhouse and Energy Reporting Act 2007 (Cth) Environmental Protection and Biodiversity Conservation Act 1999 (Cth) State and territory legislation and regulations.
Water	ISO Water Quality Standards ISO - Water quality	National Water Quality Management Strategy (NWQMS) State and territory legislation and regulations.
	WHO's Water Quality: guidelines, standards and health 924154533X.pdf (who.int)	
Soil	ISO Soil Quality Standards ISO/TC 190 - Soil quality	State and territory soil quality, contamination and management legislation and standards.
Noise	WHO Guidance on environmental noise Guidance on environmental noise (who.int)	Australian Standard AS 1055 State-based EPAs.
Chemicals/waste	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal Basel Convention on the Control of Transboundary Movements of Hazardous Wastes | UNEP - UN Environment Programme	Hazardous Waste (Regulation) Act 1989 (Cth) National Environment Protection (Movement of Controlled Waste between States and Territories) Measure 1998 (Cth)
	Stockholm Convention on Persistent Organic Pollutants Microsoft Word - Convention_text_E.doc (pops.int)	Industrial Chemicals Act 2019 (Cth) National Environment Protection Measure (NEPM) for Ambient Air Quality IChEMS (Schedules 5; 6 and 7)
	Minamata Convention on Mercury The Minamata Convention on Mercury | UNEP - UN Environment Programme	
	The Montreal Protocol on Substances that Deplete the Ozone Layer (including the Kigali amendments) MP-consolidated-English-2019.pdf (unep.org)	
	Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. Rotterdam Convention Text (pic.int)	
	Global Framework on Chemicals (previously known as Strategic Approach to International Chemicals Management (SAICM)) New SAICM Text with ICCM resolutions_E.pdf	
	ISO 11014:2009(en) Safety data sheet for chemical products ISO 11014:2009 - Safety data sheet for chemical products — Content and order of sections	

5.2 Specific Do No Significant Harm Criteria

A. Agriculture and Land Use

A1. Cropping: perennial and non-perennial crops (including horticulture and rice production)

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Potential risks and impacts to soil health, such as erosion and runoff into water courses/bodies, are identified and managed to mitigate negative impacts associated with the activity, while aiming to maintain soil organic matter. Soil conservation efforts are conducted in accordance with applicable laws or relevant international standards; including developing and maintaining (as relevant) a Land Management Plan, permits, approvals and/or reporting requirements of soil conditions • Significant risks and potential impacts associated with an activity that involves the clearing of native vegetation are identified, assessed, managed and monitored in accordance with applicable laws or relevant international standards, to eliminate or mitigate habitat loss and ecosystem degradation, including both natural and non-natural highly biodiverse grasslands, as identified by relevant authorities. • Cultivation of novel non-native or invasive species must undergo an initial risk assessment and be subject to ongoing monitoring.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • The activity utilises appropriate techniques and equipment in the application of fertilisers, pest and weed control products to minimise environmental impact, protect human health, and prevent pollution and nutrient runoff; including their application in a targeted manner.. Appropriate licencing, certification and/or record keeping is maintained as relevant in accordance with applicable laws or relevant international standards (e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products; ISO/TC 134, Fertilisers and soil conditioners; ISO 27065, Protective clothing – Performance requirements for protective clothing worn by operators applying liquid pesticides; FAO's The International Code of Conduct on Pesticide Management; Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade, the Minamata Convention on Mercury, the Montreal Protocol on Substances that Deplete the Ozone Layer, and of active ingredients).
Transition to a circular economy	Apply generic criteria.
Note	DNSH criteria do not apply to the following measures: • Measure A1.8: Purchase of low emissions cold storage • Measure A1.7: Purchase of electric and energy efficient farm vehicles and equipment

A2. Animal Production

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Potential risks and impacts to soil health, such as erosion and runoff into water courses/bodies, are identified and managed to mitigate negative impacts associated with the activity, while aiming to maintain soil organic matter. Soil conservation efforts are conducted in accordance with applicable laws or relevant international standards; including developing and maintaining (as relevant) a Land Management Plan, permits, approvals and/or reporting requirements of soil conditions • Significant risks and potential impacts associated with an activity that involves the clearing of native vegetation are identified, assessed, managed and monitored in accordance with applicable laws or international standards to eliminate or mitigate habitat loss and ecosystem degradation, including both natural and non-natural highly biodiverse grasslands, as identified by relevant authorities. • Cultivation of novel non-native or invasive species for feed and forage must undergo an initial risk assessment and be subject to ongoing monitoring.
Sustainable use and protection of water resources	Apply generic criteria. In addition: • Material risks and potential impacts associated with the activity that may lead to negative impacts to sensitive waterways, such as the Great Barrier Reef, are identified, assessed, managed and monitored to eliminate or mitigate land-based run-off, such as soil, nutrient and chemical run-off. • New activities or where an activity may result in negative impacts to sensitive waterways, are assessed and conducted in accordance with applicable laws or relevant international standards, including adherence to relevant water quality guidelines and best practice, where applicable.
Pollution prevention and control	Apply generic criteria. In addition: • The activity utilises appropriate techniques and equipment in the application of fertilisers, pest and weed control products to minimise environmental impact, protect human health, and prevent pollution and nutrient runoff; including their application in a targeted manner. Appropriate licencing, certification and/or record keeping is maintained as relevant in accordance with applicable laws or relevant international standards. • Where the activity involves the application of manure to land this is conducted in a manner that minimises nitrogen application per hectare per year, aiming to prevent over-application to safeguard soil and water quality. Manure application to land is conducted in accordance with applicable laws or relevant international standards, including standards for management of agricultural waste, developing and maintaining (as relevant) a Nutrient Management Plan and/or monitoring and reporting requirements of manure application practices Relevant international standards and frameworks: IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products; ISO/TC 134, Fertilisers and soil conditioners; ISO 27065, Protective clothing – Performance requirements for protective clothing worn by operators applying liquid pesticides; FAO's The International Code of Conduct on Pesticide Management; Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade, the Minamata Convention on Mercury, the Montreal Protocol on Substances that Deplete the Ozone Layer, and of active ingredient
Transition to a circular economy	Apply generic criteria.
Animal welfare	• Activities that involve animal rearing and handling identify and assess potential risks of incurring in animal cruelty and manage and monitor animal welfare to eliminate or mitigate the negative effects of the activity on animal wellbeing. • Animal welfare is managed in accordance with applicable laws or relevant national or international standards, including developing and maintaining (as applicable) an Animal Welfare Plan, necessary documentation of animal care practices (such as the LPA National Vendor Declarations (NVDs)) and/or the acquisition of relevant voluntary third-party certifications. • The activity utilises appropriate techniques and equipment to carry out on-farm animal husbandry practices. Activities related to animal husbandry practices are conducted in accordance with applicable laws or relevant national or international standards and guidelines, including developing and maintaining (as applicable) an Animal Welfare Plan, necessary documentation of animal care practices (such as the LPA National Vendor Declarations (NVDs)) and/or the acquisition of relevant voluntary third-party certifications. • Activities that involve animal rearing and handling follow a systematic approach to the decision-making process for loading animals for road, rail and/or sea transport that eliminates or mitigates the negative effects of the activity on animal welfare. The activity is conducted in accordance with applicable laws or relevant national or international standards; including, as applicable, adherence to available guidelines for the transportation of livestock and conducting necessary assessments of the fitness to travel of animals (i.e. Fit to Load).
Notes	DNSH criteria do not apply to the following measures: • Measure A2.10: Purchase of electric and energy efficient farm vehicles and equipment

A3. Support Activities for Agriculture and Post-harvest

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	N/A
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	N/A
Transition to a circular economy	N/A

A4. Afforestation, Reforestation and Rehabilitation

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Material risks and potential impacts associated with the activity are identified, assessed, managed and monitored to avoid causing harm to biodiversity and ecosystems and eliminate or mitigate negative effects of the activity. Forestry establishment is conducted in accordance with applicable laws or relevant national or international standards; including developing and maintaining (as relevant) a Forest Management Plan (or equivalent) that includes provisions for maintaining and possibly enhancing biodiversity, the acquisition of relevant permits and licenses for logging activities, necessary documentation of logging activities and harvesting plans, and/or the acquisition of relevant voluntary third-party certifications. • Potential risks and impacts to soil health, such as erosion and runoff into water courses/bodies, are identified and managed to mitigate negative impacts associated with the activity, while aiming to maintain soil organic matter. Soil conservation efforts are conducted in accordance with applicable laws or relevant international standards; including developing and maintaining (as relevant) a Land Management Plan, permits, approvals and/or reporting requirements of soil conditions • Significant risks and potential impacts associated with an activity that involves the clearing of native vegetation are identified, assessed, managed and monitored in accordance with applicable laws or international standards to eliminate or mitigate habitat loss and ecosystem degradation, including both natural and non-natural highly biodiverse grasslands, as identified by relevant authorities. • Cultivation of novel non-native or invasive species must undergo an initial risk assessment and be subject to ongoing monitoring.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • The activity utilises appropriate techniques and equipment in the application of fertilisers, pest and weed control products to minimise environmental impact, protect human health, and prevent pollution and nutrient runoff; including their application in a targeted manner.. Appropriate licencing, certification and/or record keeping is maintained as relevant in accordance with applicable laws or relevant international standards (IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products; ISO/TC 134, Fertilisers and soil conditioners; ISO 27065, Protective clothing – Performance requirements for protective clothing worn by operators applying liquid pesticides; FAO's The International Code of Conduct on Pesticide Management; Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade, the Minamata Convention on Mercury, the Montreal Protocol on Substances that Deplete the Ozone Layer, and of active ingredients).
Transition to a circular economy	N/A
Notes	DNSH criteria does not apply to the following measures • Measure A4.3: Purchase of electric and energy efficient forestry vehicles and equipment

A5. Existing Forest Management (incl. plantation and native)

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Material risks and potential impacts associated with the activity are identified, assessed, managed and monitored to avoid causing harm to biodiversity and ecosystems and eliminate or mitigate negative effects of the activity. Forestry establishment is conducted in accordance with applicable laws or relevant national or international standards; including developing and maintaining (as relevant) a Forest Management Plan (or equivalent) that includes provisions for maintaining and possibly enhancing biodiversity, the acquisition of relevant permits and licenses for logging activities, necessary documentation of logging activities and harvesting plans, and/or the acquisition of relevant voluntary third-party certifications. • Potential risks and impacts to soil health, such as erosion and runoff into water courses/bodies, are identified and managed to mitigate negative impacts associated with the activity, while aiming to maintain soil organic matter. Soil conservation efforts are conducted in accordance with applicable laws or relevant international standards; including developing and maintaining (as relevant) a Land Management Plan, permits, approvals and/or reporting requirements of soil conditions • Significant risks and potential impacts associated with an activity that involves the clearing of native vegetation are identified, assessed, managed and monitored in accordance with applicable laws or international standards to eliminate or mitigate habitat loss and ecosystem degradation, including both natural and non-natural highly biodiverse grasslands, as identified by relevant authorities. • Cultivation of novel non-native or invasive species must undergo an initial risk assessment and be subject to ongoing monitoring.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • The activity utilises appropriate techniques and equipment in the application of fertilisers, pest and weed control products to minimise environmental impact, protect human health, and prevent pollution and nutrient runoff; including their application in a targeted manner. Appropriate licencing, certification and/or record keeping is maintained as relevant in accordance with applicable laws or relevant international standards (IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products; ISO/TC 134, Fertilisers and soil conditioners; ISO 27065, Protective clothing – Performance requirements for protective clothing worn by operators applying liquid pesticides; FAO's The International Code of Conduct on Pesticide Management; Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade, the Minamata Convention on Mercury, the Montreal Protocol on Substances that Deplete the Ozone Layer, and of active ingredients).
Transition to a circular economy	Apply generic criteria.
Notes	DNSH criteria does not apply to the following measures • Measure A5.3: Purchase of electric and energy efficient forestry vehicles and equipment

A6. Conservation Forestry

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Significant risks and potential impacts associated with an activity that involves forest management are identified, assessed, managed and monitored to eliminate or mitigate negative environmental, social and/or economic impacts. New activities or where an activity results in a material expansion are assessed and conducted in accordance with applicable laws or relevant international standards. Including, developing and maintaining (as relevant) a Forest Management Plan (or equivalent), adherence to available guidelines and codes of practice; conducting necessary impact assessments on biodiversity and ecosystems; necessary documentation of forest management activities; the acquisition of relevant permits; and/or the acquisition of relevant voluntary third-party certifications. • Potential risks and impacts to soil health, such as erosion and runoff into water courses/bodies, are identified and managed to mitigate negative impacts associated with the activity, while aiming to maintain soil organic matter. Soil conservation efforts are conducted in accordance with applicable laws or relevant international standards; including developing and maintaining (as relevant) a Land Management Plan, permits, approvals and/or reporting requirements of soil conditions. • Significant risks and potential impacts associated with an activity that involves the clearing of native vegetation are identified, assessed, managed and monitored in accordance with applicable laws or international standards to eliminate or mitigate habitat loss and ecosystem degradation, including both natural and non-natural highly biodiverse grasslands, as identified by relevant authorities. • Cultivation of novel non-native or invasive species must undergo an initial risk assessment and be subject to ongoing monitoring.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • The activity utilises appropriate techniques and equipment in the application of fertilisers, pest and weed control products to minimise environmental impact, protect human health, and prevent pollution and nutrient runoff; including their application in a targeted manner. Appropriate licencing, certification and/or record keeping is maintained as relevant in accordance with applicable laws or relevant international standards (IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products; ISO/TC 134, Fertilisers and soil conditioners; ISO 27065, Protective clothing – Performance requirements for protective clothing worn by operators applying liquid pesticides; FAO's The International Code of Conduct on Pesticide Management; Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade, the Minamata Convention on Mercury, the Montreal Protocol on Substances that Deplete the Ozone Layer, and of active ingredients).
Transition to a circular economy	Apply generic criteria.
Notes	The DNSH criteria does not apply to the following measures • Measure A6.3: Purchases of electric and energy efficient forestry vehicles and equipment

A7. Support Services for Forestry

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	N/A
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	N/A
Transition to a circular economy	N/A

A8. Restoration and Rehabilitation of Ecosystems

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Material risks and potential impacts associated with the activity are identified, assessed, managed and monitored to avoid causing harm to biodiversity and ecosystems and eliminate or mitigate negative effects of the activity. The activity is conducted in accordance with applicable laws or relevant national or international standards; including developing and maintaining (as relevant) a Land Management Plan (or equivalent) that includes provisions for maintaining and possibly enhancing biodiversity, the acquisition of relevant permits and licenses and/or necessary documentation of management activities. • Potential risks and impacts to soil health, such as erosion and runoff into water courses/bodies, are identified and managed to mitigate negative impacts associated with the activity, while aiming to maintain soil organic matter. Soil conservation efforts are conducted in accordance with applicable laws or relevant international standards; including maintaining (as relevant) a Land Management Plan, permits, approvals and/or reporting requirements of soil conditions.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • The activity utilises appropriate techniques and equipment in the application of fertilisers, pest and weed control products to minimise environmental impact, protect human health, and prevent pollution and nutrient runoff; including their application in a targeted manner. Appropriate licencing, certification and/or record keeping is maintained as relevant in accordance with applicable laws or relevant international standards (IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products; ISO/TC 134, Fertilisers and soil conditioners; ISO 27065, Protective clothing – Performance requirements for protective clothing worn by operators applying liquid pesticides; FAO's The International Code of Conduct on Pesticide Management; Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade, the Minamata Convention on Mercury, the Montreal Protocol on Substances that Deplete the Ozone Layer, and of active ingredients).
Transition to a circular economy	N/A
Notes	DNSH criteria does not apply to the following measures • Measure A8.3: Purchases of electric and energy efficient forestry vehicles and equipment

A9. Savannah Management Using Indigenous Cultural Burning Techniques

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Material risks and potential impacts associated with the activity are identified, assessed, managed and monitored to avoid causing harm to biodiversity and ecosystems and eliminate or mitigate negative effects of the activity. The activity is conducted in accordance with applicable laws or relevant national or international standards; including developing and maintaining (as relevant) a Land and/or Fire Management Plan (or their equivalent) that includes provisions for maintaining and possibly enhancing biodiversity, adherence to available guidelines and codes of practice for public safety during burning operations; conducting necessary impact assessments on biodiversity and ecosystems; the acquisition of relevant permits (including burning permits) and licenses and/or necessary documentation of management activities. • Potential risks and impacts to soil health, such as erosion and runoff into water courses/bodies, are identified and managed to mitigate negative impacts associated with the activity, while aiming to maintain soil organic matter. Soil conservation efforts are conducted in accordance with applicable laws or relevant international standards; including maintaining (as relevant) a Land Management Plan, permits, approvals and/or reporting requirements of soil conditions.
Sustainable use and protection of water resources	N/A
Pollution prevention and control	N/A
Transition to a circular economy	N/A
Notes	DNSH criteria does not apply to the following measures • Measure A9.3: Purchases of electric and energy efficient vehicles

A10. Conservation of Natural Ecosystems

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Material risks and potential impacts associated with the activity are identified, assessed, managed and monitored to avoid causing harm to biodiversity and ecosystems and eliminate or mitigate negative effects of the activity. The activity is conducted in accordance with applicable laws or relevant national or international standards; including developing and maintaining (as relevant) a Land Management Plan (or equivalent) that includes provisions for maintaining and possibly enhancing biodiversity, the acquisition of relevant permits and licenses and/or necessary documentation of management activities. • Potential risks and impacts to soil health, such as erosion and runoff into water courses/bodies, are identified and managed to mitigate negative impacts associated with the activity, while aiming to maintain soil organic matter. Soil conservation efforts are conducted in accordance with applicable laws or relevant international standards; including maintaining (as relevant) a Land Management Plan, permits, approvals and/or reporting requirements of soil conditions.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria.
Transition to a circular economy	N/A
Notes	The DNSH criteria does not apply to the following measures • Measure A10.3: Purchases of electric and energy efficient vehicles and equipment

A11. Support Services for Natural Ecosystems

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	N/A
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	N/A
Transition to a circular economy	N/A

B. Minerals, Mining and Metals

B1. Lithium Ore Mining

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Notes	International proxies for biodiversity and ecosystem protection criteria: IRMA; Copper Mark; ICMM; RMI.
Sustainable use and protection of water resources	Apply generic criteria. In addition: • Brine-based lithium mining companies should adopt strong management systems and a stewardship approach for water resources, in line with global good practice frameworks such as Integrated Water resource management (IWRM).
Notes	International proxies for sustainable use and protection of water resources criteria: IRMA, Copper Mark, ICMM, RMI.
Pollution prevention and control	Apply generic criteria. In addition: • A risk assessment has been done to identify chemical and physical risks associated with existing mine waste (including brine). • The operating company regularly evaluates the performance of mine waste facilities to assess the effectiveness of risk management measures, including critical controls for high consequence facilities. • This is to avoid, minimise, rectify, and compensate for adverse impacts from mine waste through the implementation of a system to manage waste in line with internationally recognized frameworks and good practice • The mine does not use riverine, submarine or lake disposal for mine wastes.
Notes	International proxies for generic pollution prevention and control criteria: ICMM, RMI International proxies for tailings: IRMA, Copper Mark
Transition to a circular economy	Apply generic criteria. In addition: • Ensure the long-term environmental, economic and social stability of mining communities through the implementation of a system to manage and monitor mine closure and reclamation, and the allocation of financial provisions for mining reclamation, closure, and post-closure activities.
Notes	International proxies for circular economy criteria: IRMA, Copper Mark, ICMM, RMI.

B2. Nickel Ore Mining

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Notes	International proxies for biodiversity and ecosystem protection criteria: IRMA; Copper Mark; ICMM; RMI.
Sustainable use and protection of water resources	Apply generic criteria.
Notes	International proxies for sustainable use and protection of water resources criteria: IRMA, Copper Mark, ICMM, RMI.
Pollution prevention and control	Apply generic criteria. In addition: • A risk assessment has been carried out to identify chemical and physical risks associated with existing mine waste (including tailings) facilities. • The operating entity regularly evaluates the performance of mine waste facilities to assess the effectiveness of risk management measures, including critical controls for high consequence facilities. This is to avoid, mitigate, rectify and compensate for adverse impacts from tailings through the implementation of a system to manage on-land tailings in line with internationally recognised frameworks. • The mine does not use riverine, submarine or lake disposal for mine wastes. • Strong environmental management systems are in place, in particular for waste and emissions treatment, to ensure that harmful pollutants are not released into the environment.
Notes	International proxies for generic pollution prevention and control criteria: ICMM, RMI International proxies for tailings: IRMA, Copper Mark
Transition to a circular economy	Apply generic criteria. In addition: • Mining product hazards are assessed according to UN Globally Harmonised System of Hazard Classification and Labelling or equivalent and communicated through safety data sheets and labelling as appropriate. • The long-term environmental, economic and social stability of mining communities is supported through the implementation of a system to manage and monitor mine closure and reclamation, and the allocation of financial provisions for mining reclamation, closure, and post-closure activities. • Nickel mines, particularly for laterites, have robust closure and remediation plans, to ensure that landscapes are restored to health after excavation.
Notes	International proxies for circular economy criteria: IRMA, Copper Mark, ICMM, RMI.

B3. Copper Ore Mining

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Notes	International proxies for biodiversity and ecosystem protection criteria: IRMA; Copper Mark; ICMM; RMI.
Sustainable use and protection of water resources	Apply generic criteria.
Notes	International proxies for sustainable use and protection of water resources criteria: IRMA, Copper Mark, ICMM, RMI.
Pollution prevention and control	Apply generic criteria. In addition: • A risk assessment has been carried out to identify chemical and physical risks associated with existing mine waste (including tailings) facilities. • The operating entity regularly evaluates the performance of mine waste facilities to assess the effectiveness of risk management measures, including critical controls for high consequence facilities. This is to avoid, mitigate, rectify, and compensate for adverse impacts from tailings through the implementation of a system to manage on-land tailings in line with internationally recognised frameworks. • The mine does not use riverine, submarine or lake disposal for mine wastes, including acid drainage and chemical spills. • Strong environmental management systems are in place, both for contemporaneous impacts and to mitigate potential acid mine drainage after closure.
Notes	International proxies for generic pollution prevention and control criteria: ICMM, RMI International proxies for tailings: IRMA, Copper Mark
Transition to a circular economy	Apply generic criteria. In addition: • Mining product hazards are assessed according to UN Globally Harmonised System of Hazard Classification and Labelling or equivalent and communicated through safety data sheets and labelling as appropriate. • The long-term environmental, economic and social stability of mining communities is supported through the implementation of a system to manage and monitor mine closure and reclamation, and the allocation of financial provisions for mining reclamation, closure, and post-closure activities. • Copper mines have robust closure and remediation plans, to ensure that landscapes are fully restored after excavation.
Notes	International proxies for circular economy criteria: IRMA, Copper Mark, ICMM, RMI.

B4. Bauxite Mining

OBJECTIVE	CRITERIA
Objective	**Criteria**
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Notes	International proxies for biodiversity and ecosystem protection criteria: IRMA; Copper Mark; ICMM; RMI.
Sustainable use and protection of water resources	Apply generic criteria.
Notes	International proxies for sustainable use and protection of water resources criteria: IRMA, Copper Mark, ICMM, RMI.
Pollution prevention and control	Apply generic criteria. In addition: • A risk assessment has been carried out to identify chemical and physical risks associated with existing mine waste (including red mud). • The operating entity regularly evaluates the performance of mine waste facilities to assess the effectiveness of risk management measures, including critical controls for high consequence facilities. This is to avoid, mitigate, rectify, and compensate for adverse impacts from mine waste through the implementation of a systems to manage mine waste in line with internationally recognised frameworks and good practice. E.g. effective residue storage through filtration treatment to produce filter cake or use of amphirols or press filtration. • The mine does not use riverine, submarine or lake disposal for mine wastes.
Notes	International proxies for generic pollution prevention and control criteria: ICMM, RMI International proxies for tailings: IRMA, Copper Mark
Transition to a circular economy	Apply generic criteria. In addition: • The long-term environmental, economic and social stability of mining communities is supported through the implementation of a system to manage and monitor mine closure and reclamation, and the allocation of financial provisions for mining reclamation, closure, and post-closure activities. • The viability of reclamation and recycling projects for the use and management of mine wastes such as bauxite residues is assessed. E.g. use of bauxite residue in Portland cement clinker, supplementary cementious materials/blended cements and special calcium aluminate cements and calcium sulfo-aluminate cements. • An assessment and prioritisation of Sustainable Approach to Low-Grade Bauxite Processing is undertaken. E.g. improved bauxite and improved Bayer (IB2) process enhances the extraction of alumina from bauxite, especially low-grade bauxite. This method aims to boost alumina production efficiency while decreasing the environmental impacts typically linked with this process, notably the generation of red mud and carbon dioxide emissions.
Notes	International proxies for circular economy criteria: IRMA, Copper Mark, ICMM, RMI.

B5. Iron Ore Mining

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Notes	International proxies for biodiversity and ecosystem protection criteria: IRMA; Copper Mark; ICMM; RMI.
Sustainable use and protection of water resources	Apply generic criteria.
Notes	International proxies for sustainable use and protection of water resources criteria: IRMA, Copper Mark, ICMM, RMI.
Pollution prevention and control	Apply generic criteria. In addition: • A risk assessment has been carried out to identify chemical and physical risks associated with existing mine waste (including tailings). • The operating entity regularly evaluates the performance of mine waste facilities to assess the effectiveness of risk management measures, including critical controls for high consequence facilities. This is to avoid, mitigate, rectify, and compensate for adverse impacts from tailings through the implementation of a system to manage on-land tailings in line with internationally recognised frameworks and good practice. • The mine does not use riverine, submarine or lake disposal for mine wastes.
Notes	International proxies for generic pollution prevention and control criteria: ICMM, RMI International proxies for tailings: IRMA, Copper Mark
Transition to a circular economy	Apply generic criteria. In addition: • The long-term environmental, economic and social stability of mining communities is supported through the implementation of a system to manage and monitor mine closure and reclamation, and the allocation of financial provisions for mining reclamation, closure, and post-closure activities. • The viability of reclamation and recycling projects where they use iron ore tailings as a source of metallic iron is assessed. E.g. recycling iron from iron ore tailings through magnetising roasting and direct reduction.
Notes	International proxies for circular economy criteria: IRMA, Copper Mark, ICMM, RMI.

B6. Generic Measures for the Mining Sector

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	N/A
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	N/A
Transition to a circular economy	N/A

C. Manufacturing and Industry

C1. Refining of Copper, Lithium and Nickel

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Emissions to air (e.g. sulphur dioxide - SO2, nitrogen oxide - NOx, particulate matter, Total Organic Carbon (TOC), dioxins, mercury (Hg), hydrogen chloride (HCL), hydrogen fluoride (HF), Total Fluoride, and (PFCs) polyfluorinated hydrocarbons (PFCs)) are prevented / minimised as per national laws and regulations or international standards and guidelines (E.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products). • Contaminants, including toxins from heavy metals, are contained using best available technologies to prevent leaching into the environment. • Measures are in place to ensure no significant cross-media effects occur.
Transition to a circular economy	Apply generic criteria.

C2. Alumina Production

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Ensure emissions to air (e.g. sulphur dioxide - SO2, nitrogen oxide - NOx, particulate matter, Total Organic Carbon (TOC), dioxins, mercury (Hg), hydrogen chloride (HCL), hydrogen fluoride (HF), Total Fluoride, and (PFCs) polyfluorinated hydrocarbons (PFCs)) are prevented / minimised as per national laws and regulations and international standards and guidelines (E.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products). • Measures are in place to ensure no significant cross-media effects occur.
Transition to a circular economy	Apply generic criteria.

C3. Aluminium Smelting

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Ensure emissions to air (e.g. sulphur dioxide - SO2, nitrogen oxide - NOx, particulate matter, Total Organic Carbon (TOC), dioxins, mercury (Hg), hydrogen chloride (HCL), hydrogen fluoride (HF), Total Fluoride, and (PFCs) polyfluorinated hydrocarbons (PFCs)) are prevented / minimised as per national laws and regulations and international standards and guidelines (E.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products). • Measures are in place to ensure no significant cross-media effects occur.
Transition to a circular economy	Apply generic criteria. In addition: • Aluminium manufacturing plants need to be able to process aluminium scrap. In order to avoid unnecessary resource and energy consumption, the aluminium scrap collection and sorting activities should be optimised for separation on an alloy specific basis. If scrap alloys are mixed, the functionality of the recycled material is restricted, and valuable alloying elements may be lost.

C4. Manufacture of Hydrogen

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria. In addition: • Desalinated water used in the production of hydrogen must be sourced from plants powered by renewable energy and must meet national and international energy efficiency and water quality standards. Further, wastewater discharge methods, including brine management, must utilise best available technologies to eliminate or minimise negative ecological impacts on marine life.
Pollution prevention and control	Apply generic criteria. In addition: • Measures are in place to ensure no significant cross-media effects occur.
Transition to a circular economy	Apply generic criteria.

C5. Manufacture of Cement

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Ensure emissions to air, water and soil are prevented / minimised as per national laws and regulation and international standards and guidelines for the Production of Cement, Lime and Magnesium Oxide. (E.g.: IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems – Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products). • If refuse derived fuel (RDF) is used in the production of cement, the RDF should be a suitable specification that is beneficial, fit for purpose and will not cause harm as per national and international guidelines. The following wastes must not be used and need to be managed and treated or disposed of at suitably authorised facilities: — *Asbestos* — *CCA treated timber* — *Hazardous wastes* — *Wastes with high mineral content, e.g. soils containing polycyclic aromatic hydrocarbons* — *Medical waste* — *Radioactive wastes* — *Quarantine waste and waste of biosecurity concern* — *Scheduled wastes* — *Wastes that have an available and practical high-order recovery or reuse or recycling option according to the waste hierarchy* — *Waste treated by immobilisation or containerisation* The combustion of the RDF must be subject to risk assessment—addressing the potential for harm to human health and the environment, and modelling and monitoring—undertaken to determine the resulting emissions to atmosphere of gas and particulates. The risk assessment should include volatile and non-volatile metals, considering and detailing both the odour and design ground level concentrations, stack emission limits and the requisite pollution control equipment. Pollution control equipment includes cooling temperature of exhaust gases and controls for polychlorinated dioxins and furans. • Measures are in place to ensure no significant cross-media effects occur.
Transition to a circular economy	Apply generic criteria. In addition: • Cement manufacturing plants accept alternative fuels such as Solid Recovered Fuel (SRF) originating from waste, as well as secondary raw materials such as recycled concrete aggregates (RCA).

C6. Manufacture of Iron and Steel

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Water efficiency measures such as water recycling and closed-loop water systems are utilised where possible to minimise water consumption and enhance efficiency.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Ensure emissions to air, water and soil are prevented / minimised as per national and international standards and guidelines for iron and steel production (e.g. for pH, total suspended solids (TSS), chemical oxygen demand (COD), chromium (total) and heavy metals, for sulphur dioxide – SO2, nitrogen oxide – NOx, particulate matter, polychlorinated dibenzo-dioxins/furans, mercury (Hg), hydrogen chloride (HCL) and hydrogen fluoride (HF) (E.g: IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products). • Measures are in place to ensure no significant cross-media effects occur.
Transition to a circular economy	Apply generic criteria. In addition: • Measures are implemented to minimise contaminants in steel processing. • Best available scrap sorting and recycling technologies are utilised to increase circularity.

C7. Manufacture of Nitric Acid

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Ensure emissions to air, water and soil, including NOx and VOCs, are prevented / minimised as per international and national standards and guidelines (E.g.: IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use). Wastewater effluents with high concentrations of residual nitric acid or other contaminants are managed or contained using best available technologies. • Measures are in place to ensure no significant cross-media effects occur.
Transition to a circular economy	Apply generic criteria.

C8. Manufacture of Ammonia

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria. In addition: • Water efficiency measures such as water recycling and closed-loop water systems are utilised to minimise water consumption and enhance efficiency. • Wastewater effluents with high concentrations of ammonia or other contaminants are managed or contained using best available technologies.
Pollution prevention and control	Apply generic criteria. In addition: • Ensure emissions to air, water and soil, including NOx and VOCs, are prevented / minimised as per international and national standards and guidelines (E.g.: IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use). • Measures are in place to ensure no significant cross-media effects occur.
Transition to a circular economy	Apply generic criteria.

C9. Manufacture of Low Carbon Liquid Fuels

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Low-carbon liquid fuels are produced from any of the following feedstocks: — *Agricultural residues and by-products (palm oil, palm fatty acid distillate, cooking oil residues);* — *Algae;* — *Sustainable biomass; or* — *Circular CO2 and electricity.* • The following feedstocks are ineligible: — *Food, energy and feed crops (land use competition)* — *Animal waste to fat (it can deprive other sectors, which could switch to damaging alternatives like virgin palm oil).* — *Polymers and plastic waste (these should be used for long lasting/durable materials).*
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Ensure emissions to air, water and soil are prevented or minimised as per international standards and guidelines. (E.g.: IFC EHS Guidelines: Air emissions and ambient air quality; ISO 13065:2015: Sustainability Criteria for Bioenergy).
Transition to a circular economy	N/A

C10. Manufacture of Biogas

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Biogas is produced from any of the following feedstocks: — *commercial and municipal food waste;* — *manure;* — *agricultural waste, including organic effluent; or* • Sewage sludge.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Plant emissions to air and water are within national and international guidelines (e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products). • Emissions to air (e.g. SOx, NOx) after combustion of biogas are controlled, abated (when needed) and within the limits set by national legislation. • For biogas production, a gas-tight cover on the digestate storage is applied. In the case of anaerobic digestion of organic material, where the produced digestate is used as fertiliser or soil improver, either directly or after composting or any other treatment, it meets the requirements for fertilising materials set out in national rules on fertilisers or soil improvers for agricultural use. • Measures are in place to ensure no significant cross-media effects occur.
Transition to a circular economy	N/A

C11. Energy Efficiency for Industrial Facilities

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	N/A
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	N/A
Transition to a circular economy	N/A

C12. Manufacture of Renewable Energy Technologies

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Where applicable, vehicles do not contain lead, mercury, hexavalent chromium and cadmium.
Transition to a circular economy	Apply generic criteria.

C13. Manufacture of Equipment for the Production of Hydrogen Through Electrolysis

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria. In addition: • Emissions to air, water and soil are prevented / minimised as per international and national standards (e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products; ISO 19884; IEC 63341-2 ; ISO 16111).
Pollution prevention and control	Apply generic criteria.
Transition to a circular economy	Apply generic criteria.

C14. Manufacture of Low-carbon Technologies for Transport

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Emissions to air, water and soil are prevented / minimised as per international standards and guidelines and in compliance with restricted chemicals and hazardous substances regulations (e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products).
Transition to a circular economy	Apply generic criteria.

C15. Manufacture of Energy Efficiency Equipment for Buildings

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Emissions to air, water and soil are prevented / minimised as per international and national standards (e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products).
Transition to a circular economy	Apply generic criteria.

C16. Manufacture and Recycling of Batteries

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Ensure emissions to air, water and soil are prevented / minimised as per international and national standards (e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products).
Transition to a circular economy	Apply generic criteria.

C17. Manufacture of Plastics in Primary Form Through Recycling

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Ensure emissions to air, water and soil are prevented / minimised as per international and national standards (e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products).
Transition to a circular economy	Apply generic criteria.

D. Electricity Generation and Supply

D1. Energy Generation from Solar PV and CSP

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Potential negative impacts of the cooling system on water resources are avoided.
Transition to a circular economy	Apply generic criteria.

D2. Energy Generation from Onshore and Offshore Wind

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition, for offshore wind: • Any required mitigation measures are in place to avoid or reduce underwater noise generated by the installation of offshore wind turbines. • Measures are in place to minimise the toxicity of anti-fouling paint and biocides as per international standards and guidelines (e.g. International Convention on the Control of Harmful Anti-fouling Systems on Ships; ISO 13073).
Transition to a circular economy	Apply generic criteria.

D3. Energy Generation from Ocean Energy

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Any required mitigation measures are in place to avoid or reduce underwater noise created by the generation of electricity. • Measures are in place to minimise the toxicity of anti-fouling paint and biocides as per international standards and guidelines (e.g. International Convention on the Control of Harmful Anti-fouling Systems on Ships; ISO 13073).
Transition to a circular economy	Apply generic criteria.

D4. Energy Generation from Hydropower

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria. In addition: • Construction of new hydropower should not increase river fragmentation. Consequently, refurbishment of existing hydropower plants and rehabilitation of existing barriers should be prioritised. • All necessary mitigation measures should be implemented to reach good ecological status or potential, in particular regarding ecological continuity and ecological flow. Priority should be given to nature-based solutions.
Pollution prevention and control	Apply generic criteria. In addition: • Discharges to water bodies during hydropower construction are avoided. • Plant is maintained for high reliability to reduce potential loss of containment and minimise pollution.
Transition to a circular economy	Apply generic criteria.

D5. Geothermal Energy Generation

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Discharges to water bodies should comply with individual license conditions for specific operations, where applicable, and/or national threshold values in line with the international standards and guidelines. • The operations of high-enthalpy geothermal energy systems ensures that adequate abatement systems are in place to comply with international standards and guidelines (e.g. IFC's Environmental, Health, and Safety Guidelines for Geothermal Power Generation. ISO 14001:2015 Environmental management systems — Requirements with guidance for use). • Thermal anomalies associated with the discharge of waste heat should not exceed 3°K for groundwater environments or 1.5°K for surface water environments, respectively.
Transition to a circular economy	Apply generic criteria.

D6. Energy Generation from Bioenergy

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Feedstocks used to produce modern bioenergy comply with one of the following standards: — *Forest Stewardship Council (FSC)* — *Biomass Biofuels voluntary scheme (2BSvs)* — *Bonsucro (Better Sugarcane Initiative)* — *Roundtable of Sustainable Biomaterials (RSB)* — *Round Table on Responsible Soy (RTRS)* — *International Sustainability and Carbon Certification (ISCC and/or ISCC plus)*
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Plant emissions to air and water are within national and international guidelines (e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products). • For anaerobic digestion of organic material, where the produced digestate is used as fertiliser or soil improver, either directly or after composting or any other treatment, it meets the requirements for fertilising materials set out in national standards on fertilisers or soil improvers for agricultural use. • Measures are in place to ensure no significant cross-media effects occur.
Transition to a circular economy	Apply generic criteria.

D7. Storage of Electricity

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria. In addition, for pumped hydropower storage connected to a river body: • The activity also complies with the specific DNSH criteria for energy generation from hydropower.
Pollution prevention and control	Apply generic criteria. In addition: • The activity complies with international standards, particularly if the storage is above five tonnes (e.g. ISO 19884 Gaseous Hydrogen – Cylinders and tubes for stationary storage; IEC 63341-2 Railway applications – Rolling stock – Fuel cell systems for propulsion - Part 2: Hydrogen storage system; ISO 16111 Transportable Gas Storage Devices - Hydrogen Absorbed in Reversible Metal Hydrides).
Transition to a circular economy	Apply generic criteria.

D8. District Heating and Cooling Systems

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria.
Transition to a circular economy	Apply generic criteria.

D9. Production of Heating or Cooling from Waste Heat

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria.
Transition to a circular economy	Apply generic criteria.

D10. Transmission and Distribution of Electricity

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition, for underline powerlines: • Avoid routings that would have a significant impact on marine and terrestrial ecosystems.
Sustainable use and protection of water resources	N/A
Pollution prevention and control	Apply generic criteria. In addition, for overhead high-voltage lines: • Respect applicable norms and regulations to limit impact of electromagnetic radiation on human health (e.g. 1998 ICNIRP (International Commission on Non-Ionizing Radiation Protection)). • Do not use PCBs Polyclorinated Biphenyls.
Transition to a circular economy	Apply generic criteria.

D11. Transmission and Distribution of Renewable and Low-carbon Gases

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria.
Transition to a circular economy	Apply generic criteria.

E. Construction and Buildings

E1. Construction of New Buildings

The following DNSH criteria apply to all **new construction activities** involving buildings with a **GFA > 5,000m2**.

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Notes	The pre-screen checklist from Green Star Buildings is an acceptable proxy for applying the generic DNSH criteria for climate adaptation and resilience.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Projects must not be constructed on land that is Prime Agricultural Land; Old growth forest; Wetland listed as "High national importance", "Matters of national significance" scheduled under Environmental Protection and Biodiversity Conservation Act (1999) whether they have Minister assessment as "controlled action" or not • All timber must be sustainably sourced or reused. FSC and PEFC are acceptable proxies.
Sustainable use and protection of water resources	Apply generic criteria. In addition: • All New Fittings and Fixture to be WELS rated and within 1 star of best available for each fitting/fixture category. As of October 2024, the WELS threshold applied to DNSH results in the minimum requirements listed in the table below.
Pollution prevention and control	Apply generic criteria. In addition: • All existing contaminants found in the works area (including lead, asbestos, or PCBs) are addressed in accordance with applicable local regulations or relevant international standards prior to any new construction. • All groundwater extracted during the construction and operation of the building is treated onsite, and no contaminants are discharged into the environment (or sewer system). • Stormwater shall be filtered for contaminants through GPTs.
Transition to a circular economy	Apply generic criteria. In addition: • At least 80 percent of construction waste by weight is to be diverted from landfill.

WELS rating requirements

Fixture / Appliance type	Best Available WELS rating (reference)	DNSH minimum WELS rating requirements
Taps	6 star	5 star
Urinals	6 star	5 star
Toilets	6 star	5 star
Showers	5 star	4 star
Clothes washing machines	5 star	4 star
Dishwashers	6 star	5 star

E2. Acquisition and Ownership

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Notes	The pre-screen checklist from Green Star Buildings is an acceptable proxy for applying the generic DNSH criteria for climate adaptation and resilience.
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	N/A
Transition to a circular economy	N/A

E3. Renovation and Upgrades

The following DNSH criteria apply to all **renovation and upgrade** activities involving works with a **capital investment value of > $5,000,000 (AUD)**.

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Notes	The pre-screen checklist from Green Star Buildings is an acceptable proxy for applying the generic DNSH criteria for climate adaptation and resilience.
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	Apply generic criteria. In addition: • All New Fittings and Fixture to be WELS rated and within 1 star of best available for each fitting/fixture category. As of October 2024, the WELS threshold applied to DNSH results in the minimum requirements listed in the table below.
Pollution prevention and control	Apply generic criteria. In addition: • All existing contaminants found in the works area (including lead, asbestos, or PCBs) are addressed in accordance with applicable local regulations or relevant international standards prior to any new construction. • All groundwater extracted during the construction and operation of the renovation works is treated onsite and no contaminants are discharged into the environment (or sewer system). Stormwater shall be filtered for contaminants through GPTs.
Transition to a circular economy	Apply generic criteria. In addition: • At least 80 percent of construction waste by weight is to be diverted from landfill.

WELS rating requirements

Fixture / Appliance type	Best Available WELS rating (reference)	DNSH minimum WELS rating requirements
Taps	6 star	5 star
Urinals	6 star	5 star
Toilets	6 star	5 star
Showers	5 star	4 star
Clothes washing machines	5 star	4 star
Dishwashers	6 star	5 star

E4. Replacement of Major Plant and Equipment

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Notes	The pre-screen checklist from Green Star Buildings is an acceptable proxy for applying the generic DNSH criteria for climate adaptation and resilience.
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	N/A
Transition to a circular economy	N/A

E5. Residential and Small Commercial Upgrades

The following DNSH criteria apply to all **renovation and upgrade** activities involving works with a **capital investment value of > $5,000,000 (AUD**).

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	N/A
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	Apply generic criteria. In addition: • All New Fittings and Fixture to be WELS rated and within 1 star of best available for each fitting/fixture category. As of October 2024, the WELS threshold applied to DNSH results in the minimum requirements listed in the table below.
Pollution prevention and control	Apply generic criteria. In addition: • All existing contaminants found in the works area (including lead, asbestos, or PCBs) are addressed in accordance with applicable local regulations or relevant international standards prior to any new construction. • All groundwater extracted during the construction and operation of the building is treated onsite and no contaminants are discharged into the environment (or sewer system). Stormwater shall be filtered for contaminants through GPTs.
Transition to a circular economy	Apply generic criteria. In addition: • At least 80 percent of construction waste by weight is to be diverted from landfill.

WELS rating requirements

Fixture / Appliance type	Best Available WELS rating (reference)	DNSH minimum WELS rating requirements
Taps	6 star	5 star
Urinals	6 star	5 star
Toilets	6 star	5 star
Showers	5 star	4 star
Clothes washing machines	5 star	4 star
Dishwashers	6 star	5 star

E6. Supply of Equipment for Buildings

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	N/A
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	N/A
Transition to a circular economy	N/A

E7. Infrastructure Supporting Low Emissions Precincts

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	N/A
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	N/A
Transition to a circular economy	N/A

F. Transport

I1. Road Passenger Transport – Motorbikes, Cars and Light Commercial Vehicles

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	Apply generic criteria. In addition: • Tyre standards comply with the Australian Design Rules or equivalent international tyre standards or regulations. Noise emissions from vehicles, including noise generated by tyres, comply with the Australian Design Rules or equivalent international vehicle standards (e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 13.040.50: Transport Exhaust emissions; ISO 362 Measurement of noise emitted by accelerating road vehicles).
Transition to a circular economy	Apply generic criteria. In addition: • Measures are in place to manage waste during the use phase (maintenance) and the end-of-life of the fleet. This includes through the reuse and recycling of batteries and electronics (in particular critical raw materials therein), in accordance with the waste hierarchy. • Available tyre product stewardship schemes are utilised.

I2. Road Passenger Bus Transport

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	Apply generic criteria. In addition: • Tyre standards comply with the Australian Design Rules or equivalent international tyre standards or regulations. • Noise emissions from vehicles, including noise generated by tyres, comply with the Australian Design Rules or equivalent international vehicle standards (e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 13.040.50: Transport Exhaust emissions; ISO 362 Measurement of noise emitted by accelerating road vehicles; ISO 28580:2018 - Passenger car, truck and bus tyre rolling resistance measurement method — Single point test and correlation of measurement results).
Transition to a circular economy	Apply generic criteria. In addition: • Measures are in place to manage waste during the use phase (maintenance) and the end-of-life of the fleet. This includes through the reuse and recycling of batteries and electronics (in particular critical raw materials therein), in accordance with the waste hierarchy. • Available tyre product stewardship schemes are utilised.

I3. Micromobility

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	Apply generic criteria.
Transition to a circular economy	Apply generic criteria. In addition: • Measures are in place to manage waste during the use phase (maintenance) and the end-of-life of the fleet. This includes through the reuse and recycling of batteries and electronics (in particular critical raw materials therein), in accordance with the waste hierarchy.

I4. Road Freight Transport – Rigid Trucks

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	Apply generic criteria. In addition: • Tyre standards comply with the Australian Design Rules or equivalent international tyre standards or regulations. • Noise emissions from vehicles, including noise generated by tyres, comply with the Australian Design Rules or equivalent international vehicle standards (e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 13.040.50: Transport Exhaust emissions; ISO 362 Measurement of noise emitted by accelerating road vehicles; ISO 28580:2018 - Passenger car, truck and bus tyre rolling resistance measurement method — Single point test and correlation of measurement results).
Transition to a circular economy	Apply generic criteria. In addition: • Measures are in place to manage waste during the use phase (maintenance) and the end-of-life of the fleet. This includes through the reuse and recycling of batteries and electronics (in particular critical raw materials therein), in accordance with the waste hierarchy. • Available tyre product stewardship schemes are utilised.

I5. Road Freight Transport – Articulated Trucks

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	Apply generic criteria. In addition: • Tyre standards comply with the Australian Design Rules or equivalent international tyre standards or regulations. • Noise emissions from vehicles, including noise generated by tyres, comply with the Australian Design Rules or equivalent international vehicle standards (e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 13.040.50: Transport Exhaust emissions; ISO 362 Measurement of noise emitted by accelerating road vehicles; ISO 28580:2018 - Passenger car, truck and bus tyre rolling resistance measurement method — Single point test and correlation of measurement results)
Transition to a circular economy	Apply generic criteria. In addition: • Measures are in place to manage waste during the use phase (maintenance) and the end-of-life of the fleet. This includes through the reuse and recycling of batteries and electronics (in particular critical raw materials therein), in accordance with the waste hierarchy. • Available tyre product stewardship schemes are utilised.

I6. Passenger and Freight Air Transport

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria, ensuring that changing climate conditions do not compromise safety or airworthiness of the operation of an aircraft.
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	N/A
Pollution prevention and control	Apply generic criteria. In addition: • The aircraft complies with the following amendments to the Chicago Convention on Civil Aviation: — *Amendment 13 of Volume I (noise), Chapter 14, Annex 16* — *Amendment 10 of Volume II (engine emissions), Chapters 2 and 4 of Annex 16*
Transition to a circular economy	Apply generic criteria. In addition: • Measures are in place to prevent the generation of waste in the use phase (maintenance, operation of air transport services with regards to catering waste) and manage any remaining waste in accordance with the waste hierarchy. • Measures are in place to control and manage hazardous materials, in particular through the reuse and recycling of batteries and electronics and the critical raw materials therein. • Measures are in place to manage waste in the end-of life of the fleet. For example, decommissioning contractual agreements with aircraft recycling service providers; and ensuring that measures are in place to segregate and treat components and materials to maximise recycling and reuse, in accordance with the waste hierarchy.

I7. Air Transport Ground Handling Operations

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	N/A
Sustainable use and protection of water resources	Apply generic criteria. In addition: • De-icing measures and discharge controls are in place at an airport level to reduce the environmental impact of de-icing agents and runoff or waste from de-icing activities on watercourses. For example, the use of more environmentally sustainable chemicals, glycol recovery and surface water treatment.
Pollution prevention and control	Apply generic criteria. In addition: • The aircraft complies with the following amendments to the Chicago Convention on Civil Aviation: — *Amendment 13 of Volume I (noise), Chapter 14, Annex 16* — *Amendment 10 of Volume II (engine emissions), Chapters 2 and 4 of Annex 16*
Transition to a circular economy	Apply generic criteria. In addition: • Measures are in place to prevent the generation of waste in the use phase (maintenance, operation of air transport services with regards to catering waste) and manage any remaining waste in accordance with the waste hierarchy. • Measures should also include the control and management of hazardous materials, in particular through the reuse and recycling of batteries and electronics and the critical raw materials therein. • Measures are in place to manage waste in the end-of life of the fleet. For example, decommissioning contractual agreements with aircraft recycling service providers; and ensuring that measures are in place to segregate and treat components and materials to maximise recycling and reuse, in accordance with the waste hierarchy.

I8. Urban and Suburban Passenger Rail Transport

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Noise and vibrations of rolling stock are minimised in line with noise regulations.
Transition to a circular economy	Apply generic criteria. In addition: • Measures are in place to manage waste during the use phase (maintenance) and the end-of-life of the fleet. This includes through the reuse and recycling of batteries and electronics (in particular critical raw materials therein), in accordance with the waste hierarchy.

I9. Interurban Passenger Rail Transport

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Noise and vibrations of rolling stock are minimised in line with noise regulations.
Transition to a circular economy	Apply generic criteria. In addition: • Measures are in place to manage waste during the use phase (maintenance) and the end-of-life of the fleet. This includes through the reuse and recycling of batteries and electronics (in particular critical raw materials therein), in accordance with the waste hierarchy.

I10. Freight Rail Transport

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Noise and vibrations of rolling stock are minimised in line with noise regulations.
Transition to a circular economy	Apply generic criteria. In addition: • Measures are in place to manage waste during the use phase (maintenance) and the end-of-life of the fleet. This includes through the reuse and recycling of batteries and electronics (in particular critical raw materials therein), in accordance with the waste hierarchy.

I11. Inland Passenger and Freight Water Transport

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria.
Sustainable use and protection of water resources	Apply generic criteria. In addition: • The activity does not lead to releases of ballast water containing aquatic invasive species.
Pollution prevention and control	Apply generic criteria.
Transition to a circular economy	Apply generic criteria. In addition: • Measures are in place to manage waste during the use phase (maintenance) and the end-of-life of the fleet. This includes through the reuse and recycling of batteries and electronics (in particular critical raw materials therein), in accordance with the waste hierarchy.

I12. Maritime Passenger and Freight Water Transport

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Underwater noise pollution is mitigated, consistent with the IMO Guidelines for the Reduction of Underwater Noise.
Sustainable use and protection of water resources	Apply generic criteria. In addition: • The activity does not lead to releases of ballast water containing non-indigenous species (consistent with the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM)). • Measures are in place to prevent the introduction of non-indigenous species through biofouling of hull and niche areas of ships (consistent with best practices identified in the International Maritime Organization's (IMO) Biofouling Guidelines).
Pollution prevention and control	Apply generic criteria. In addition: • With respect to managing waste and reducing legal discharges, the ship is operated in accordance with Annex V to the International Convention for the Prevention of Pollution from Ships (the IMO MARPOL Convention). • With respect to the reduction of sulphur oxides emissions and particulate matters, vessels comply with Regulation 14 of Annex VI to the IMO MARPOL Convention. • With respect to nitrogen oxides (NOx) emissions, vessels comply with Regulation 13 of Annex VI to IMO MARPOL Convention. Tier II NOx requirement applies to ships constructed after 2011. Only while operating in NOx emission control areas established under IMO rules, ships constructed after 1 January 2016 comply with stricter engine requirements (Tier III) reducing NOx emissions. • Discharges of black and grey water comply with Annex IV to the IMO MARPOL Convention. • Measures are in place to minimise the toxicity of anti-fouling paint and biocides as per international standards and guidelines (e.g. International Convention on the Control of Harmful Anti-fouling Systems on Ships; ISO 13073).
Transition to a circular economy	Apply generic criteria. In addition: • Measures are in place to manage waste during the use phase (maintenance) and the end-of-life of the fleet. This includes through the reuse and recycling of batteries and electronics (in particular critical raw materials therein), in accordance with the waste hierarchy.

I13. Vessels for Port Operations

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Underwater noise pollution is mitigated, consistent with the IMO Guidelines for the Reduction of Underwater Noise.
Sustainable use and protection of water resources	Apply generic criteria. In addition: • The activity does not lead to releases of ballast water containing non-indigenous species (consistent with the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM)). • Measures are in place to prevent the introduction of non-indigenous species through biofouling of hull and niche areas of ships (consistent with best practices identified in the International Maritime Organization's (IMO) Biofouling Guidelines).
Pollution prevention and control	Apply generic criteria. In addition: • With respect to managing waste and reducing legal discharges, the ship is operated in accordance with Annex V to the International Convention for the Prevention of Pollution from Ships (the IMO MARPOL Convention). • With respect to the reduction of sulphur oxides emissions and particulate matters, vessels comply with Regulation 14 of Annex VI to the IMO MARPOL Convention. • With respect to nitrogen oxides (NOx) emissions, vessels comply with Regulation 13 of Annex VI to IMO MARPOL Convention. Tier II NOx requirement applies to ships constructed after 2011. Only while operating in NOx emission control areas established under IMO rules, ships constructed after 1 January 2016 comply with stricter engine requirements (Tier III) reducing NOx emissions. • Discharges of black and grey water comply with Annex IV to the IMO MARPOL Convention. • Measures are in place to minimise the toxicity of anti-fouling paint and biocides as per international standards and guidelines (e.g. International Convention on the Control of Harmful Anti-fouling Systems on Ships; ISO 13073).
Transition to a circular economy	Apply generic criteria. In addition: • Measures are in place to manage waste during the use phase (maintenance) and the end-of-life of the fleet. This includes through the reuse and recycling of batteries and electronics (in particular critical raw materials therein), in accordance with the waste hierarchy.

I14. Low-carbon Road Transport Infrastructure

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Wildlife hazard management procedures are in place to minimise wildlife strikes. For example, fences along areas with high strike risk; and viaducts, tunnels, overpasses and bridges in high strike risk areas.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Measures are in place to minimise noise and vibrations, dust and other pollutants during the construction, renewal and upgrade of infrastructure, consistent with applicable laws and relevant international standards (e.g. ISO 2887:2020; ISO ISO/TS 21928-2:2023, Sustainability in buildings and civil engineering works – Sustainability indicators).
Transition to a circular economy	Apply generic criteria. In addition: • Re-used parts and recycled materials are used during the renewal, upgrade and construction of infrastructure. • At least 80 percent (by weight) of non-hazardous construction and demolition waste (excluding naturally occurring material) generated on the construction site must be prepared for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials.

I15. Micromobility Infrastructure

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Wildlife hazard management procedures are in place to minimise wildlife strikes. For example, fences along areas with high strike risk; and viaducts, tunnels, overpasses and bridges in high strike risk areas.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Measures are in place to minimise noise and vibrations, dust and other pollutants during the construction, renewal and upgrade of infrastructure, consistent with applicable laws and relevant international standards (e.g. ISO 2887:2020; ISO ISO/TS 21928-2:2023, Sustainability in buildings and civil engineering works – Sustainability indicators).
Transition to a circular economy	Apply generic criteria. In addition: • Re-used parts and recycled materials are used during the renewal, upgrade and construction of infrastructure. • At least 80 percent (by weight) of non-hazardous construction and demolition waste (excluding naturally occurring material) generated on the construction site must be prepared for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials.

I16. Low-carbon Public Transport Infrastructure

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Wildlife hazard management procedures are in place to minimise wildlife strikes. For example, fences along areas with high strike risk; and viaducts, tunnels, overpasses and bridges in high strike risk areas.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Measures are in place to minimise noise and vibrations, dust and other pollutants during the construction, renewal and upgrade of infrastructure, consistent with applicable laws and relevant international standards (e.g. ISO 2887:2020; ISO ISO/TS 21928-2:2023, Sustainability in buildings and civil engineering works – Sustainability indicators).
Transition to a circular economy	Apply generic criteria. In addition: • Re-used parts and recycled materials are used during the renewal, upgrade and construction of infrastructure. • At least 80 percent (by weight) of non-hazardous construction and demolition waste (excluding naturally occurring material) generated on the construction site must be prepared for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials.

I17. Low-carbon Air Transport Infrastructure

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Measures are in place to prevent the spread of invasive plants through proper maintenance. • Wildlife hazard management and monitoring procedures are in place, consistent with applicable laws and International Civil Aviation Organisation Doc 9137.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Measures are in place to minimise noise and vibrations, dust and other pollutants during the construction, renewal and upgrade of infrastructure, consistent with applicable laws and relevant international standards (e.g. ISO 2887:2020; ISO ISO/TS 21928-2:2023, Sustainability in buildings and civil engineering works – Sustainability indicators).
Transition to a circular economy	Apply generic criteria. In addition: • Re-used parts and recycled materials are used during the renewal, upgrade and construction of infrastructure. • At least 80 percent (by weight) of non-hazardous construction and demolition waste (excluding naturally occurring material) generated on the construction site must be prepared for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials.

I18. Low-carbon Rail Transport Infrastructure

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Wildlife hazard management procedures are in place to minimise wildlife strikes. For example, fences along areas with high strike risk; and viaducts, tunnels, overpasses and bridges in high strike risk areas.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Measures are in place to minimise noise and vibrations, dust and other pollutants during the construction, renewal and upgrade of infrastructure, consistent with applicable laws and relevant international standards (e.g. ISO 2887:2020; ISO ISO/TS 21928-2:2023, Sustainability in buildings and civil engineering works – Sustainability indicators).
Transition to a circular economy	Apply generic criteria. In addition: • Re-used parts and recycled materials are used during the renewal, upgrade and construction of infrastructure. • At least 80 percent (by weight) of non-hazardous construction and demolition waste (excluding naturally occurring material) generated on the construction site must be prepared for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials.

I19. Low-carbon Water Transport Infrastructure

OBJECTIVE	CRITERIA
Climate change adaptation and resilience	Apply generic criteria.
Biodiversity and ecosystem protection	Apply generic criteria. In addition: • Measures are in place to prevent the spread of invasive plants through proper maintenance.
Sustainable use and protection of water resources	Apply generic criteria.
Pollution prevention and control	Apply generic criteria. In addition: • Measures are in place to minimise noise and vibrations, dust and other pollutants during the construction, renewal and upgrade of infrastructure, consistent with applicable laws and relevant international standards (e.g. ISO 2887:2020; ISO ISO/TS 21928-2:2023, Sustainability in buildings and civil engineering works – Sustainability indicators).
Transition to a circular economy	Apply generic criteria. In addition: • Re-used parts and recycled materials are used during the renewal, upgrade and construction of infrastructure. • At least 80 percent (by weight) of non-hazardous construction and demolition waste (excluding naturally occurring material) generated on the construction site must be prepared for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials.

Appendix 6: Minimum Social Safeguards Guidance

Corporate governance

1. The entity demonstrates a commitment to implementing high quality corporate governance, including for environmental and social matters.

Indicators	Guidance	Alignment with existing standards and frameworks
The entity develops and applies good corporate principles and effective self-regulatory practices and management systems that foster a relationship of confidence and mutual trust between the entity and the societies in which it operates.	The entity publicly commits to respecting the OECD Guidelines and/or UNGPs.	OECD Guidelines, Chapter 2, General Policies 6 and 7 UNGP 11 and 12 UNGPRF A1 GRI 103-2

2. The entity's board and/or management is qualified and adequately structured to oversee the entity's strategy, management and performance.

Indicators	Guidance	Alignment with existing standards and frameworks
The entity has a board and/or management of effective composition and size with clearly delineated roles and responsibilities to adequately implement its corporate governance policies.	The entity has one or more documents setting out: a) the roles and responsibilities of its board and/or management, including in relation to the oversight of climate, environmental, and/or social issues that materially affect the entity; b) those matters expressly reserved to the board and those delegated to management; and c) its process for periodically evaluating the performance of its board and/or management. For listed entities, this document is a board charter or similar.	IFC Corporate Governance Methodology UNGP 19 UNGPRF A2 and A2.1 GRI 102-19 and 102-20 ASX Corporate Governance Principles

3. The entity's internal controls, systems and training are sufficient to ensure compliance with relevant laws and regulations, including those related to anti-bribery and corruption; fair competition and taxation; and consumer protection.

Indicators	Guidance	Alignment with existing standards and frameworks
The entity has developed and adopted adequate policies and procedures for preventing, detecting and addressing bribery and other forms of corruption.	The entity has an anti-bribery and corruption policy and procedures in place that are tailored and proportionate to the entity's size, operations and risk exposure and overseen by the entity's directors and/or management. The entity's anti-bribery and corruption policy can be a stand-alone policy or form part of its code of conduct. The policy acknowledges the serious criminal and civil penalties that may be incurred and the reputational damage that may be done if the entity is involved in bribery or corruption, and prohibits conduct that could amount to bribery or corruption. It also outlines appropriate controls around political donations and/or offering or accepting gifts; and requires breaches of the policy to be reported to the appropriate person or body within the entity. The entity's anti-bribery and corruption procedures enable it to prevent, track, investigate and respond to allegations or incidents relating to bribery and corruption and may include risk assessment and due-diligence processes, whistleblowing mechanisms and investigative procedures, as well as regular communication and training. The entity's anti-bribery and corruption policy and procedures are periodically reviewed for effectiveness.	SASB Topic: Business Ethics & Transparency (Mining Industry) EM-MM-510a.1. (Description of the management system for prevention of corruption and bribery throughout the value chain.) ESRS G2 28,30 ASX Corporate Governance Principles Crimes Legislation Amendment (Combatting Foreign Bribery) Act 2024 (Cth)
The entity has robust systems in place to ensure compliance with the letter and spirit of the tax law and regulations of the countries in which it operates.	The entity treats tax governance and tax compliance as important elements of its oversight and broader risk management systems. In particular, the board or senior management has tax risk management strategies and/or systems in place - including assurance processes where applicable - to ensure that the financial, regulatory and reputational risks associated with taxation are fully identified and evaluated.	OECD Guidelines, Chapter XI.1, XI.2. GRI 207-2 ESRS 2 31 (a)
The entity incorporates sustainability considerations into its guidelines / criteria for sourcing goods and services, to account for significant risks associated with environmental and social externalities created by suppliers through their operational activities.	The entity has a process for screening, selecting, monitoring, and engaging with suppliers on their environmental and social impacts that is proportionate to the entity's size, operations and risk exposure.	GRI 414 SASB: Labour Conditions in the Supply Chain; Raw Materials Sourcing
The entity regularly implements communication and training programs to raise awareness of, and support compliance with, anti-bribery, corruption and fair competition laws and policies among employees and persons or entities linked by a business relationship.	The entity delivers communication and training on anti-corruption, bribery and fair competition to its management and employees in a form and frequency that the entity deems necessary to build capacity. Training promotes employee awareness of the importance of compliance with all applicable laws and regulations and covers the entity's commitments and expectations for employees and other business relationships.	ASX Corporate Governance Principles. OECD Guidelines, X.4. GRI 205, ESRS G3 40,42 SASB Topic: Business Ethics & Transparency (Mining Industry) Crimes Legislation Amendment (Combatting Foreign Bribery) Act 2024 (Cth)
The entity protects consumer privacy by ensuring it collects and uses consumer data in a lawful manner and takes all reasonable measures to safeguard the personal data it collects, stores, processes and disseminates.	Where an entity collects or uses consumer data, the entity has a system for identifying and addressing data security risks, including regular risk assessments of its data security systems, and takes necessary actions to mitigate any identified risks. The entity also discloses any incidents of violation of customer protections that have been reported or confirmed, including the remedial action(s) taken.	OECD Guidelines VIII.6 SASB topic: Data Security GRI 418

4. The entity has policies and mechanisms in place to enable effective stakeholder engagement.

Indicators	Guidance	Alignment with existing standards and frameworks
The entity's board and/or management recognises that the entity is dependent on its social licence to operate and therefore relies on a range of stakeholders (including communities, consumers, suppliers, employees, governments, investors, regulators and suppliers) to operate and succeed.	The entity has clearly identified its key stakeholders and has a strategy or processes in place to engage with them and report material issues to the board and/or management.	ACSI Governance Guidelines ASX Corporate Governance Principles
The entity's board or management ensures the entity provides stakeholders with access to an operational grievance mechanism(s) or mechanisms that allows them to raise and seek resolution or remedy for grievances that may occur in relation to the entity's operations or actions.	The entity has an operational grievance mechanism(s) in place for stakeholders to address complaints and provide appropriate resolutions. The grievance mechanism(s) is legitimate, accessible, predictable, equitable, transparent, rights-compatible and a source of continuous learning in line with the UNGPs. The mechanism addresses a range of grievances, including human rights issues and whistleblowing, while ensuring access to other judicial or non-judicial mechanisms is not impeded. Refer to the Human Rights and First Nations indicators and criteria for further guidance on grievance mechanism concerning human rights issues and First Nations Peoples.	UNGP Guiding Principle 31 OECD Guidelines, Chapter VIII. OECD/LEGAL/-356

5. The entity discloses whether the entity, its board or management, including the board or management of any subsidiaries, has been convicted of corruption or bribery, breach of competition law, tax evasion or tax avoidance.

Indicators	Guidance	Alignment with existing standards and frameworks
The entity discloses, without prejudice to national laws and requirements, any misconduct related to bribery and other forms of corruption, and measures adopted to address cases of suspected bribery and other forms of corruption.	The entity discloses any confirmed incidents of bribery or corruption during the relevant reporting period, including sanctions or legal cases brought against the entity, its directors or employees and the remedial steps taken by the entity including any disciplinary action taken against offending directors or employees. The entity discloses all activities it undertakes in countries that rank among the 20 lowest on Transparency International's Corruption Perception Index.	OECD Guidelines GRI 205 ESRS G2 41, 43
The entity discloses any instances in which it has been found guilty of tax evasion or tax avoidance through aggressive tax planning.	The entity discloses any instances where the entity, its directors or management are convicted of violating the tax laws of the countries in which they operate, and the remedial actions taken including any disciplinary action taken against offending directors or employees in the last five years. The entity provides a description of the mechanisms it has in place to raise concerns about the entity's business conduct and integrity in relation to taxation.	OECD Guidelines GRI 207-2 ESRS 2 7
The entity has disclosed, without prejudice to national laws and requirements, any misconduct related to anti-trust and fair competition, as well as the measures adopted to address such cases.	The entity discloses any confirmed violations of competition laws where the entity or its subsidiaries were named as a participant by a legal authority during the relevant reporting period. The disclosure includes information on legal proceedings and remedial actions implemented to prevent future breaches of anti-trust and fair competition laws and policies including any disciplinary action taken against offending directors or employees.	OECD Guidelines GRI 206 SASB topic: Pricing Integrity & Transparency ESRS G2 45, G3 47

Human rights[3]

1. The entity has a public policy commitment that outlines the entity's commitment to respect human rights in line with the expectations in the UN Guiding Principles on Business and Human Rights (UNGPs).

Indicators	Guidance	Alignment with existing standards and frameworks
(a) The entity publicly commits to respect all internationally recognised human rights, in line with the expectations outlined in the UNGPs	The entity publicly commits to respecting all internationally recognised human rights as outlined by the UN Declaration on Human Rights, the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights and the ILO Declaration on Fundamental Principles and Rights at Work. The entity also commits to aligning with the UNGPs. This commitment can be made in a standalone Human Rights Policy or integrated into other policy documents.	UNGP 11, 12 and 16 OECD Guidelines, Chapter IV, Commentary para 49 GRI 2 2021, Disclosure 2-23 UNGC CoP G2 CHRB A1.1
(b) The policy commitment is signed off at the most senior level of the entity	The entity's highest governance body (e.g. Board) or most senior executive (i.e. the CEO) signs off on the policy commitment.	UNGP 16 OECD Guidelines, Chapter IV, Commentary para 49 GRI 2 2021, Disclosure 2-23 UNGC CoP G2 CHRB A.2.1
(c) The policy commitment sets out expectations for workers, officers and directors and its business relationships	The policy commitment clearly outlines expectations for workers, officers and directors and its business relationships (e.g. suppliers, joint venture partners, franchisees, customers) to respect human rights.	UNGP 16 OECD Guidelines, Chapter IV, Commentary para 49 GRI 2 2021, Disclosure 2-23 UNGC CoP HR2.1

3 The human rights criteria and indicators apply to First Nations rights and Cultural Heritage (next section). However, the First Nations rights and cultural heritage criteria and indicators provide additional, specific expectations.

2. The entity has a human rights due diligence process to identify, prevent, mitigate and account for how they address their actual and potential adverse human rights impacts through their operations and value chains, that is appropriate to the entity's size, circumstances and operating context.

Indicators	Guidance	Alignment with existing standards and frameworks
(a) The entity identifies and assesses its actual and potential adverse human rights impacts across its operations and value chain	The entity proactively identifies and assesses its actual and potential (i.e. risks to human rights) adverse human rights impacts across its operations and value chain on an on-going basis. When identifying and assessing its actual and potential adverse human rights impacts, entities should consider all internationally recognised human rights. However, the Australian Sustainable Finance Taxonomy has identified core social pillars which are particularly relevant to the Australian context. While not ignoring other human rights issues, entities should consider actual and potential adverse human rights impacts related to **employment, labour and working conditions, occupational health and safety, modern slavery, gender equality, non-discrimination, diversity and equal opportunity, and the rights of First Nations Peoples** when conducting human rights due diligence. Having identified the actual and potential adverse human rights impacts including considering any actual and potential adverse human rights impacts related to the core social pillars above, the entity prioritises the most salient human rights issues for action. That is, the human rights at risk of the most severe negative impact through the entity's operations and value chain. Saliency is determined by considering the severity – encompassing the concepts of scale, scope and irremediability - and likelihood of an adverse human rights impact. The process to identify and assess actual and potential adverse human rights impacts should take into consideration factors such as sectoral risks, geographical risks, risks related to at risk, marginalised or vulnerable populations and the entity's business model. It should also be informed by a range of sources including internal and external expertise and meaningful consultation with potentially affected stakeholders (see indicator on stakeholder engagement for further guidance). This process considers both risk of harm to people and risks to the business, though they will often overlap. However, saliency assessments should only be based on risk to people.	UNGP 17, 18 and 24 OECD Guidelines, Chapter IV, Commentary para 50 GRI 3 2021, Disclosure 3-3 UNGC CoP G6 and G7 CHRB B.2.1 and B.2.2
(b) The entity integrates the findings of its assessments of its actual and potential adverse human rights impacts into relevant internal functions and processes, and takes appropriate action	The entity integrates the findings of its assessments of its actual and potential adverse human rights impacts into relevant internal functions and processes, to ensure appropriate measures are taken to prevent, mitigate and remediate adverse human rights impacts, starting with the most salient risks and impacts. Such measures could include integrating human rights expectations into contract clauses, building workers' and suppliers' capacity on human rights, developing action plans and key performance indicators, allocating senior leadership and other responsibility for human rights risk management, establishing an internal mechanism (e.g. a cross-functions working group) to coordinate and drive action across the entity and engaging in sector based collaborations to address key risks.	UNGP 17, 19 and 24 OECD Guidelines, Chapter IV, Commentary para 50 GRI 3 2021, Disclosure 3-3 UNGC CoP G7 CHRB B.2.3

(c) The entity regularly conducts internal capacity building on human rights	The entity builds the capacity of its workers, senior executives and directors by delivering human rights training in a form and frequency that the entity deems necessary to build capacity. The training is tailored to address the potential and actual adverse human rights impacts that are specific to the entity. The training also includes the entity's commitments, expectations for workers, suppliers and other business relationships in line with the expectations of the UNGPs. Good practice includes disclosing the content of the training at a high level, who received the training, the form (e.g., in-person, online) and frequency of the training and tracking the outcomes and the effectiveness of the training.	UNGP 16 OECD Guidelines, Chapter IV, Commentary para 49 GRI 2 2021, Disclosure 2-24 UNGC CoP HR5 CHRB B.1.5.
(d) The entity tracks the effectiveness of the steps it has taken in response to its actual and potential adverse human rights impacts	The entity tracks, evaluates and discloses the effectiveness of actions taken in response to its actual and potential adverse human rights impacts. This could include the development of human rights-related key performance indicators. The entity draws on feedback from both internal and external stakeholders; uses appropriate qualitative and quantitative indicators including with a focus on outcome (i.e. the results the entity hopes to achieve) not just output based indicators (i.e. processes and actions that contribute to outcomes); and uses this information to improve its processes and systems on an on-going basis.	UNGP 17 and 20 OECD Guidelines, Chapter IV, Commentary para 50 GRI 3 2021, Disclosure 3-3 UNGC CoP G7, G9 and HR6 CHRB B.2.4
(e) The entity communicates externally how it addresses it actual and potential adverse human impacts	The entity's communications are in a form and frequency that reflect its actual and potential adverse human rights impacts and are accessible to its intended audiences (including affected and potentially affected stakeholders). The information provides sufficient detail to evaluate the adequacy of the entity's response to the entity's actual and potential adverse impacts particularly in relation to its salient human rights issues. Communications should not pose risks to stakeholders, including potentially affected stakeholders, and may take into account legitimate requirements of commercial confidentiality and reflect variations in the entity's size and structure. Communication can take a variety of forms such as in-person and online meetings, consultation with affected stakeholders and formal public reports (e.g. sustainability reports). Annual reporting on human rights due diligence and remediation processes is encouraged.	UNGP 21 OECD Guidelines, Chapter IV, Commentary para 50 GRI 2 2021, Disclosure 2-29 CHRB B.2.5
(f) The entity engages with stakeholders throughout the human rights due diligence process, including affected and potentially affected stakeholders where appropriate	Meaningful stakeholder engagement (including with affected and potentially affected stakeholders and human rights defenders) is central to effective human rights due diligence. The entity engages with stakeholders (including affected and potentially stakeholders and including at risk, marginalised or vulnerable stakeholders or their representatives) on an ongoing basis to understand its actual and potential adverse human rights impacts and receive feedback on actions taken. For indicators and guidance specific to engagement with First Nations Peoples, see the First Nations Minimum Social Safeguards.	UNGP 16, 18, 19, 20, 21, 22 and 29 OECD Guidelines, Chapter II, Commentary para 28 GRI 3 2021, Disclosure 3-1 and 3-3 UNGC CoP HR3 CHRB B.1.8, B.2.1, B.2.2 and B.2.5

3. The entity has processes in place to enable the remediation of adverse human rights impacts in line with the expectations of the UNGPs.

Indicators	Guidance	Alignment with existing standards and frameworks
The entity has a grievance mechanism(s) in place that can receive human rights related complaints and makes efforts to cooperate with other legitimate grievance mechanisms and processes	The entity has one or more mechanism(s) through which workers, communities, consumers and other stakeholders whose human rights may be adversely impacted by the entity (including by the entities' suppliers or other business partners as appropriate and in line with the UNGPs), can raise complaints or concerns in relation to human rights issues. The mechanism(s) may be managed by the company or by third parties. In order to ensure their effectiveness, the entity's grievance mechanisms should be legitimate, accessible, predictable, equitable, transparent, rights-compatible, a source of continuous learning and based on engagement and dialogue (in line with the UNGPs). This includes establishing safeguards so complaints can be made without fear of retaliation or reprisal (e.g. confidentiality requirements, non-retaliation policy and the option for complaints to be made anonymously). The mechanism also does not prevent access to other judicial or non-judicial mechanisms and makes efforts to cooperate with any such legitimate grievance mechanisms or processes. Good practice also includes encouraging business partners to have their own grievance mechanism(s) in place that can receive human rights-related complaints. The entity discloses on the types of complaints made including complaints that were not processed and why, and the outcomes and follow-up activities for completed cases. This information can be aggregated and anonymised to safeguard complainants. Refer to the Governance and First Nations indicators and criteria for further guidance on grievance mechanism concerning governance issues and First Nations Peoples.	UNGP 22, 29, 30 and 31 OECD Guidelines Chapter IV, Commentary para 5 GRI 3 2021, Disclosure 3-3 UNGC CoP G8 and HR7 CHRB C.1, C.2 and C.4
The entity provides for or cooperates in remediation where it has identified it has caused or contributed to the adverse human rights impact	Where it identifies it has caused or contributed to an adverse impact (in line with the UNGPs), the entity provides for or cooperates in effective remediation through legitimate processes. Remediation can be provided in a variety of forms (e.g. apology, restitution, rehabilitation, financial or non-financial compensation) and should be decided in consultation with affected stakeholders. The entity also takes actions to prevent similar adverse human rights impacts in the future. Where adverse human rights impacts have occurred that the entity has not caused or contributed to, but which are directly linked to its operations, products or services by their business relationships (see key terms on X), the entity should seek to use its leverage to prevent and mitigate the impacts, and may choose to take a role in providing for or cooperating in remediation.	UNGP 13, 19, 22 and 31 OECD Guidelines Chapter IV, Commentary para 6 GRI 3 2021, Disclosure 3-3 UNGC CoP HR7 CHRB C.7

First Nations rights and cultural heritage

First Nations rights

1. The entity shall seek to understand, respect and support the rights of First Nations Peoples and seek to embed respect for those rights into business practices.

Indicators	Guidance	Alignment with existing standards and frameworks
The entity makes a public commitment with a measurable action plan for employees and supply chain.	The entity publicly commits to understanding, respecting and supporting the rights of First Nations Peoples through the development of a policy. The policy commitment is endorsed at a board level and sets out expectations for employees and supply chain detailing activities that enable understanding, respect for and support of the rights of First Nations. E.g. a Reconciliation Action Plan, a position statement, embedded into corporate training.	UNGPs 16 IFC Performance Standard 7 IRMA 2.2.1
The entity provides appropriate training for staff and embeds minimum standards for culturally appropriate engagement with First Nations	Entity staff undergo training to understand First Nations cultures, traditions, and protocols. Communication is conducted in a respectful and culturally sensitive manner. E.g. providing cultural awareness training to staff, developing and implementing culturally informed engagement protocols.	IFC Performance Standard 1.17

2. The entity shall seek to implement mechanisms in which to record and report on its significant, actual, material, and potential impacts on First Nations communities with cultural rights and interests on lands, waterways and sea country where the entity or its supply chain are operating.

Indicators	Guidance	Alignment with existing standards and frameworks
The entity measures and reports on its activity impacting First Nations to relevant authorities, First Nations communities and stakeholders.	The entity maintains detailed records of its operations, including location, activities, and interactions with First Nations communities. Records specifically track the potential and actual impacts on First Nations communities. Records include information about suppliers, their operations, and potential impacts on First Nations communities. The entity reports on its impacts to relevant authorities, First Nations communities, and stakeholders at regular intervals. Reports are clear, concise, and accessible to all relevant parties. Reports include feedback and input from First Nations communities.	IFC Performance Standard 7 UNPG 20
The entity adheres to measures that monitor impacts of activity on First Nations and maintains compliance standards to minimise risk.	The entity conducts regular assessments to identify and evaluate potential and actual impacts on First Nations communities. First Nations communities are involved in the assessment process. Assessments lead to the development of mitigation plans to address negative impacts. The entity undergoes regular independent audits to assess compliance with the criteria. There are clear mechanisms for reporting non-compliance or concerns. The entity promptly addresses any identified non-compliance issues.	IFC Performance Standard 7

3. In ongoing consultation and collaboration with First Nations, the entity shall seek to demonstrate effective stakeholder engagement in a structured and culturally appropriate manner to collaborate with First Nations on mechanisms that are implemented to monitor and control business activity that impacts First Nations.

Indicators	Guidance	Alignment with existing standards and frameworks
The entity embeds community engagement practices that develop and maintain ongoing relationships.	The entity maintains open and ongoing communication with First Nations communities. The entity seeks input from First Nations communities on its operations and decision-making. The entity explores opportunities for benefit-sharing with First Nations communities. The entity has embedded a culturally considered grievance mechanism. See Human Rights criteria.	IFC Performance Standard 7
The entity embeds protocols that facilitate collaborative decision making with First Nations on business activity that impacts them and their communities.	The entity involves First Nations communities in decision-making processes related to relevant business activities. The entity strives to build consensus among First Nations communities and other stakeholders. The entity respects the rights of First Nations communities to self-determination and cultural integrity and incorporates free prior and informed consent processes into business practice. The entity and First Nations communities develop joint monitoring mechanisms to track the impacts of business activities. Mechanisms are in place to identify and address potential negative impacts early on. The entity is prepared to take corrective actions if necessary to mitigate negative impacts.	Self-determination principle of UNDRIP IFC Performance Standard 7 IRMA 2.2

First Nations cultural heritage

4. In ongoing consultation and collaboration with First Nations, the entity investigates, records and manages Cultural Heritage within its operations ensuring risks and impacts, potential, perceived and actual are managed and protected effectively.

Indicators	Guidance	Alignment with existing standards and frameworks
The entity consults and collaborates with First Nations to identify cultural heritage sites, artifacts and landscapes within its operations and avoids impacts on cultural heritage sites. Measures are taken to preserve sites.	The entity conducts thorough surveys to identify cultural heritage sites, artifacts, and landscapes within its operations. First Nations communities are involved in the identification process to ensure cultural significance is accurately recognised. Traditional knowledge is used to inform the identification of cultural heritage sites. The entity seeks to avoid or minimise impacts on cultural heritage sites. Measures are implemented to preserve and conserve cultural heritage sites. Mitigation measures are monitored and evaluated to ensure their effectiveness.	IFC Performance Standard 1 & 8 IRMA 3.7 Cultural Heritage
Through ongoing consultation and collaboration, the entity incorporates traditional knowledge into management plans that protect cultural heritage.	The entity maintains ongoing consultation with First Nations communities regarding cultural heritage management. Traditional knowledge is incorporated into cultural heritage management plans. The entity maintains detailed records of cultural heritage both tangible and intangible activities. Access to cultural heritage sites is managed to protect their integrity. First Nations communities are involved in the management of cultural heritage matters relevant to them. The entity conducts regular monitoring to ensure compliance with cultural heritage management plans. Independent audits are conducted to assess compliance. Any non-compliance issues are addressed promptly.	IRMA 3.7 Cultural Heritage

Appendix 6.2 Minimum Social Safeguards – Key Terms

Aboriginal Cultural Heritage refers to knowledge and lore, practices and people, objectives and places that are valued, culturally meaningful and connected to identity and Country. Aboriginal Cultural Heritage shapes identity and is a lived spirituality fundamental to the wellbeing of communities through connectedness across generations.

Actual or potential adverse human rights impact occurs when an action removes or reduces the ability of an individual to enjoy their human rights.

Affected and potentially affected stakeholders are those people whose human rights may be impacted by business operations, products or services.

Cause, contribute or directly linked to is defined in accordance with the UNGPs, which outline that there are three ways in which an entity can be involved in an adverse human rights impact:

- it may cause the impact through its own activities;
- it may contribute to the impact if its actions or omissions facilitate, enable or incentivise an adverse human rights impact to the extent that the impact would not have occurred without these actions or omissions; and
- it can be directly linked to an adverse impact through the activities of a third party.

How close an entity is to an impact informs what actions they are expected to take. For example, where an entity identifies that it has caused or contributed to an adverse human rights impact, it should provide for or cooperate in remediation. If an entity is

directly linked to the impact, then it does not have to remediate the impact itself. It should, however, consider what role it might take in remediation, and use and build the leverage it has with the business partner that caused or contributed to the harm, to encourage remedy.

Country is a term used by First Nations peoples to refer to the lands, waters and skies to which they are connected through ancestral ties and family origins.

First Nations rights are rights that pertain to First Nations under the United Nations Declaration on the Rights of Indigenous Peoples.

Free, Prior and Informed Consent (FPIC) centres on obtaining consent from Indigenous Peoples for any activities undertaken on their land. It recognises the critical decision-making role of Traditional Owners.

Grievance mechanism is a process that allows for all people who could be impacted by an entity's operations and activities to raise grievances concerning averse human rights impacts and seek remedy.

Human rights due diligence is a way for entities to proactively manage their actual or potential human rights impacts on people. It should include assessing actual and potential adverse human rights, integrating and acting upon the findings, tracking responses, and communicating how impacts are addressed.

Native Title is the recognition that Aboriginal and Torres Strait Islander people have rights and interests in relation to land and waters according to their traditional laws and customs as set out in Australian law. Native title is governed by the Native Title Act 1993 (Cth). The source of Native Title lies in the laws and customs observed by Aboriginal and Torres Strait Islander people when Australia was colonised by Europeans.

Salient human rights issues are the human rights at risk of the most severe negative impact through the entity's activities and business relationships.

Self-determination is concerned with the fundamental right of people to shape their own lives. First Nations self-determination is an ongoing process of ensuring that First Nations peoples are able to make decisions about matters that affect their lives.

Workers includes employees, contractors and contingent workers.

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