Second-Party Opinion

Macquarie Green Finance Framework

Evaluation Summary

Sustainalytics is of the opinion that the Macquarie Green Finance Framework is credible and impactful and aligns[1] with the four core components of the Green Bond Principles 2021 and Green Loan Principles 2023. This assessment is based on the following:

USE OF PROCEEDS The eligible categories for the use of proceeds – Renewable Energy, Energy Efficiency, Waste Management, Sustainable Construction and Real Estate and Sustainable Transportation – are aligned with those recognized by the the Green Bond Principles and Green Loan Principles. Sustainalytics considers that investments in the eligible categories will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 7, 9, 11 and 12.

PROJECT EVALUATION AND SELECTION Macquarie's Green Finance Working Group will be responsible for the evaluation and selection of assets and projects. Macquarie's Environmental and Social Risk policy which is applicable to all assets and project investment decisions made under the Framework. Sustainalytics considers Macquarie's risk management systems to be adequate and the project selection process to be in line with market practice.

MANAGEMENT OF PROCEEDS Macquarie's Green Finance Working Group will be responsible for the management and allocation of proceeds through a register of green financing transactions and eligible assets. Macquarie commits to allocate the proceeds at issuance. Pending full (re)allocation, unallocated proceeds may be temporarily invested in other green bonds or held in accordance with Macquarie's liquidity management policy. In case of a shortfall in eligible green projects extending beyond 24 months, Macquarie may consider a cash tender offer to bondholders. This is in line with market practice. Further, in the unlikely event of insufficient participation in the cash tender offer with the green bonds remaining outstanding, the remaining proceeds may no longer be allocated to eligible green projects. In such an event, Sustainalytics considers the green bonds as not aligned with Green Bond Principles 2021.

REPORTING Macquarie commits to report on the allocation of proceeds in its Green Finance Report on its website on an annual basis where a green financing transaction is outstanding and the use of proceeds from the green financing transaction have been allocated. Allocation reporting will include information such as the amount allocated to eligible projects in aggregate, balance of any proceeds from any green financing transaction that have not yet been allocated and examples of eligible projects. In addition and where possible, Macquarie intends to report on the estimated environmental impacts of the use of proceeds using relevant impact metrics. Sustainalytics views Macquarie's allocation and impact reporting as aligned with market practice.

Second-Party Opinion

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[1] Macquarie may opt to buy back their green bonds to address shortfalls in eligible projects persisting beyond 24 months, which is in line with Green Bond Principles. In the unlikely event where the buy back is insufficient to address the shortfall and the proceeds remain unallocated, Sustainalytics considers such green bonds as not aligned with the Green Bond Principles. For more details, please refer to Management of Proceeds under Section 1.

Introduction

Macquarie Group Limited and its subsidiaries, including Macquarie Bank Limited ("Macquarie") is a global financial services group in 34 markets in asset management; retail and business banking; wealth management; leasing and asset financing; commodity trading; renewables development; specialist advice; and access to capital and principal investment. Headquartered in Sydney, Australia, Macquarie employed more than 20,666 people globally as of 31 March 2024.[2]

Macquarie has developed the Macquarie Green Finance Framework dated August 2024 (the "Framework"), under which Macquarie may issue Green Financing Transactions (GFT) such as bonds, loans and other debt or financing structures[3] and use the proceeds to finance or refinance, in whole or in part, existing and future projects that are expected to deliver environmental benefits to support Macquarie's business strategy and vision. Sustainalytics notes that it is market expectation to define all types of instruments that Macquarie intends to issue under the Framework and encourages Macquarie to define the same while reporting.

The Framework defines eligibility criteria in five green categories:

1. Renewable Energy
2. Energy Efficiency
3. Waste Management
4. Sustainable Construction and Real Estate
5. Sustainable Transportation

Macquarie engaged Sustainalytics to review the Framework and provide a Second-Party Opinion on the Framework's environmental credentials and its alignment with the Green Bond Principles 2021 (GBP)[4] and Green Loan Principles 2023 (GLP).[5] The Framework has been published in a separate document.[6]

Scope of work and limitations of Sustainalytics' Second-Party Opinion

Sustainalytics' Second-Party Opinion reflects Sustainalytics' independent[7] opinion on the alignment of the reviewed Framework with current market standards and the extent to which the eligible project categories are credible and impactful.

As part of the Second-Party Opinion, Sustainalytics assessed the following:

- The Framework's alignment with the Green Bond Principles 2021, as administered by ICMA, and the Green Loan Principles 2023, as administered by LMA, APLMA and LSTA;
- The credibility and anticipated positive impacts of the use of proceeds; and
- The alignment of the issuer's sustainability strategy and performance and sustainability risk management in relation to the use of proceeds.

For the use of proceeds assessment, Sustainalytics relied on its internal taxonomy, version 1.16, which is informed by market practice and Sustainalytics' expertise as an ESG research provider.

As part of this engagement, Sustainalytics held conversations with various members of Macquarie to understand the sustainability impact of its business processes and planned use of proceeds, as well as the management of proceeds and reporting aspects of the Framework. Macquarie representatives have confirmed that: (1) they understand it is the sole responsibility of Macquarie to ensure that the information provided is complete, accurate and up to date; (2) that they have provided Sustainalytics with all relevant information and (3) that any provided material information has been duly disclosed in a timely manner. Sustainalytics also reviewed relevant public documents and non-public information.

[2] Macquarie Group, "Annual Report", (2024), at: https://www.macquarie.com/au/en/investors/reports/full-year-2024.html
[3] Sustainalytics has reviewed only the financial instruments that are specified in the Framework. Sustainalytics's Second-Party Opinion only applies to the instruments expressly mentioned in Macquarie Green Finance Framework.
[4] The Green Bond Principles are administered by the International Capital Market Association and are available at https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/.
[5] The Green Loan Principles are administered by the Loan Market Association, Asia Pacific Loan Market Association and Loan Syndications and Trading Association and are available at https://www.lsta.org/content/green-loan-principles/
[6] The Macquarie Green Finance Framework is available at: https://www.macquarie.com/in/en/investors/debt-investors.html
[7] When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not the least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics' hallmarks is integrity, another is transparency.

This document contains Sustainalytics' opinion of the Framework and should be read in conjunction with that Framework.

Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and Macquarie.

Sustainalytics' Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated impacts of eligible projects expected to be financed with bond and loan proceeds but does not measure the actual impact. The measurement and reporting of the impact achieved through projects financed under the Framework is the responsibility of the Framework owner.

In addition, the Second-Party Opinion opines on the potential allocation of proceeds but does not guarantee the realized allocation of the bond and loan proceeds towards eligible activities.

No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument, either in favour or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that Macquarie has made available to Sustainalytics for the purpose of this Second-Party Opinion.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on Macquarie Green Finance Framework

Sustainalytics is of the opinion that the Macquarie Green Finance Framework is credible, impactful and aligned with the four core components of the GBP and GLP.[8] Sustainalytics highlights the following elements of the Framework:

- Use of Proceeds:
  - The eligible categories – Renewable Energy, Energy Efficiency, Waste Management, Sustainable Construction and Real Estate and Sustainable Transportation – are aligned with those recognized by the GBP and GLP.
  - Macquarie has defined a look-back period of three years for the refinancing of operating expenditures under the Framework, which Sustainalytics considers to be in line with market practice.
  - Under the Renewable Energy category, Macquarie may finance or refinance projects in accordance with the following eligibility criteria:
    - Planning, development and operations of renewable energy projects with lifecycle GHG emission intensity below 100 gCO_2e/kWh,[9] including:
      - On-shore and off-shore wind energy projects.
      - Solar photovoltaic, concentrated solar power (CSP) and solar thermal power plants. For CSP and solar thermal power plants, at least 85% of the electricity is generated from solar energy sources.
      - Geothermal energy generation projects.
      - Ocean energy projects where the fossil fuel backup will be limited to powering monitoring, operating and maintenance equipment, as well as resilience or protection measures, and restart capabilities.
      - Low-impact hydropower energy generation projects, including hydropower projects without an artificial reservoir or with low-storage capacity and that meet the following criteria: i) for facilities that became operational after the end of 2019, the lifecycle GHG emissions intensity is below 50 gCO_2e/kWh or the power density is greater than 10 W/m^2; or ii) for facilities that became operational before the end of 2019, the lifecycle GHG emissions intensity is

[8] Macquarie may opt to buy back their green bonds to address shortfalls in eligible projects persisting beyond 24 months, which is in line with Green Bond Principles. In the unlikely event where the buy back is insufficient to address the shortfall and the proceeds remain unallocated, Sustainalytics considers such green bonds as not aligned with the Green Bond Principles. For more details, please refer to Management of Proceeds under Section 1.
[9] Except for hydropower generation facilities that became operational after the end of 2019.

below 100 gCO_2e/kWh or the power density is greater than 5 W/m^2. Financing such projects will adhere to following: i) for all new hydropower projects, an environmental impact assessment will be conducted by a credible body per project to ensure that no significant environmental and social risks, negative impacts or controversies have been identified; and ii) the exclusion of hydropower projects with significant controversies related to environmental and social risks or impacts, such as loss of habitat and biodiversity, and displacement of people.

- Sustainalytics considers such expenditures to be in line with market practice

- Manufacturing, transport, and storage of green hydrogen and green hydrogen fuel cells considering following criteria: i) hydrogen manufacturing through electrolysis powered by renewable energy; and ii) hydrogen with life cycle GHG emissions saving requirement of 73.4% for hydrogen and 70.0% for hydrogen-based synthetic fuels relative to a fossil fuel comparator of 94 gCO_2e/MJ. Financing excludes following: i) hydrogen produced through a steam-reforming process using natural gas; ii) hydrogen produced by using oil or coal; and iii) green-hydrogen-based synthetic fuel cells sourced from fossil fuels; and iv) transportation pipelines and storage infrastructure not dedicated for green hydrogen. Sustainalytics considers such expenditures to be in line with market practice.
- Manufacturing, transport and storage of biofuels and generation of electricity considering following criteria:
  - Biofuels where the lifecycle GHG emissions savings are at least 65% relative to a fossil fuel comparator of 94 gCO_2e/MJ as per RED II Standard.[10] Additionally, the financing will include pre-2021 or pre-2015 biofuel installations, which achieve a life cycle GHG emissions reduction of at least 60% and 50%, respectively. Feedstock will include waste feedstock, including biodegradable waste, forestry and agricultural residue. Non-waste biomass feedstock will undergo a due diligence where a food security impact assessment will be conducted to demonstrate no competition with food and feed.
  - Generation of electricity from sustainable biomass with life cycle GHG emission savings of at least 80% relative to a fossil fuel comparator of 183 gCO_2e/MJ as mentioned In the Annex V to Directive (EU) 2018/2001.[11] Feedstock for electricity generation will include sustainable biomass feedstock certified under the Sustainable Biomass Program (SBP)[12] and Roundtable on Sustainable Biomaterials (RSB)[13]
  - Financing will exclude : i) biofuels derived from crops that diminish soil carbon pools, use peat or are derived from biomass suitable for food production; ii) production of biofuel feedstock that has taken place on land with high biodiversity within at least the past 10 to 15 years; iii) land with a high amount of carbon has been converted for biofuel feedstock production; iv) manufacturing of alternative fuels that use fossil fuel-based feedstock (e.g., petroleum-based plastics); and v) biofuels derived from palm oil or palm oil waste from non- Roundtable on Sustainable Palm Oil (RSPO)[14] certified operations.
  - Sustainalytics considers such expenditures to be in line with market practice and encourages Macquarie to pursue third-party certifications to validate their sustainability credentials.

– Under the Energy Efficiency category, Macquarie may finance or refinance grid technologies and projects intended to increase energy efficiency and reduce technical losses in the transmission and distribution (T&D) infrastructure. Financing will exclude: i) energy efficiency application to

[10] EC, "Renewable Energy – Recast to 2030 (RED II)", at: https://joint-research-centre.ec.europa.eu/welcome-jec-website/reference-regulatory-framework/renewable-energy-recast-2030-red-ii_en
[11] European Parliament, "Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018", (2018), at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.328.01.0082.01.ENG
[12] SBP, at: https://sbp-cert.org/getting-certified/about-certification/
[13] RSB, at: https://rsb.org/certification/certification-schemes/
[14] RSPO, at: https://rspo.org/as-an-organisation/our-standards/

transmissions lines connected or dedicated to fossil fuel power; ii) products and technologies designed or dedicated to cater to fossil fuel infrastructure; and iii) grid technologies designed or intended for processes that are inherently carbon intensive, or primarily driven or powered by fossil fuels, such as oil or gas-fired boilers, cogeneration and CHP units; or production processes in heavy industries, such as steel, cement and aluminium. Sustainalytics considers investments under this category to be in line with market practice and encourages Macquarie to report on estimated or achieved energy efficiency gains, where feasible.

- Under the Waste Management category, Macquarie may finance or refinance the following projects and activities:
  - Collection and transportation of non-hazardous waste segregated at source for recycling and reuse. Financing excludes waste collection and transportation vehicles that are not zero-direct emissions vehicles. Sustainalytics considers such investments to be in line with the market practice.
  - Investment in repair, recycling and reuse processes and technologies that support in maximizing a product's or material's lifecycle, which include the following:
    - The processing of recyclable waste, such as steel, aluminium and glass, into secondary raw materials.
    - E-waste recycling, where financing will be limited to projects accompanied by robust waste management processes to mitigate associated environmental risks.
    - Activities that support product reuse which results in products reverted to their original use with very minimal or without any further pre-processing.
    - Financing will exclude the refurbishment, reconditioning and repair of products specifically for use in the extraction of fossil fuels or that inherently rely on fossil fuels.
    - Sustainalytics considers these expenditures to be in line with market practice.
  - Compost facilities to produce compost from residual waste, where the by-product from composting facilities must not be landfilled. This is in line with market practice.
  - Waste-to-energy (WtE) facilities using technologies such as incineration, gasification, pyrolysis and plasma considering following criteria:
    - Waste feedstocks will include: i) municipal solid waste, where the majority of recyclables (especially plastics) will be segregated before energy conversion; ii) forestry and agricultural residues; iii) Marine Stewardship Council (MSC)[15] or Aquaculture Stewardship Council (ASC)[16] certified fish residues; iv) wastewater and sewage sludge, which will exclude wastewater from fossil fuel operations; iv) palm kernel shells or palm oil mill effluent from RSB-[17] or RSPO-certified palm oil operations.[18] Sustainalytics considers using above feedstock to be in line with market practice.
    - Financing may include waste-to-energy facilities using landfill gas capture from a decommissioned or closed landfill with high gas capture efficiency of 75% or more[19] Sustainalytics notes that recovering methane produced from a closed landfill will not prolong the lifespan of the landfill and is a key strategy to reduce methane emissions from waste. This is in line with market practice.
    - WtE facilities using pyrolysis will be financed considering following: i) facilities limited to using biological waste feedstock for biochar production; and ii) will be powered by low carbon energy sources mentioned in Renewable Energy use of proceeds above. Sustainalytics considers financing such activity to be in line with market practice.
    - WtE facilities using plasma technology will be powered by low-carbon energy sources mentioned in Renewable Energy use of proceeds above.
    - In addition to above criteria, Waste-to-energy (WtE) facilities must demonstrate sufficient efficiency to achieve recovery status according to the R1 energy efficiency formula in the Waste Framework Directive.[20]

[15] MSC, at: https://www.msc.org/for-business/fisheries
[16] ASC, at: https://asc-aqua.org/producers/asc-standards/
[17] RSB, at: https://rsb.org/certification/
[18] RSPO, at: https://rspo.org/as-an-organisation/certification/
[19] Financing will exclude landfill gas captured for flaring and projects using plastics, rubber and tire-derived fuels for energy conversion.
[20]. CIWM, "Directive 2008/98/EC on waste and repealing certain Directives", at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0098

- The by-products from WtE facilities should meet eligibility guidelines for biofuels and bioenergy criteria mentioned in Renewable Energy category in the Framework.
- Overall, for financing waste-to-heat facilities using technologies, including incineration, gasification and plasma, Sustainalytics recognizes that energy from waste through incineration and gasification could take out of circulation potentially recyclable materials and undermine two of the main objectives of a zero-waste circular economy, i.e., waste prevention and recycling. Additionally, for such projects to have low emissions intensities, the composition of residual waste, particularly fossil carbon content, is a crucial consideration. However, Sustainalytics also notes that due to constraints on recycling in many parts of the world, energy from waste can offer a better residual waste management option than landfills in many cases. Sustainalytics encourages Macquarie to promote the removal of an increasing amount of recyclables, especially plastics and metals, and the monitoring of thermal efficiency of the financed facilities.

– Under the Sustainable Construction and Real Estate category, Macquarie may finance or refinance following expenditures:
  - Construction of building with expenditures related to: i) development of buildings[21] with reduced emissions; and ii) use of energy-efficient windows and doors, light sources, HVAC and water heating systems[22] that adhere to one of the following criteria:
    - Buildings that have achieved or are expected to achieve one of the following green buildings certification levels: i) Green Star (6 Star);[23] ii) BREEAM (Excellent or above);[24] or iii) LEED (Gold or above).[25] Sustainalytics views these certification schemes as robust and credible.
    - Buildings among the top 15% of emissions intensity performance in the local market.
  - Renovation, retrofitting or fit out of existing or new buildings that leads to one of the following criteria:
    - a minimum 30% improvement in primary energy demand (PED) over initial performance.[26]
    - achievement of one of the green building certification schemes mentioned above in the development of buildings expenditures.[27]
  - The financing excludes: i) development of new fossil fuel powered buildings; ii) construction of buildings whose use will result in significant indirect GHG emissions; iii) buildings designed for the purpose of extraction, storage, transportation or manufacture of fossil fuels; iv) energy-efficient technologies designed or intended for processes that are inherently carbon-intensive, or primarily driven or powered by fossil fuels; and v) development or acquisition of industrial facilities designed or intended for controversial activities that have harmful social or environmental impact.
  - Sustainalytics considers investments under this category to be in line with market practice.

– Under the Sustainable Transportation category, Macquarie may finance or refinance assets, companies[28] or technologies considering following criteria:
  - Public and private passenger and freight[29] transport vehicles with zero direct (tailpipe) GHG emissions, which will be electric- or hydrogen-powered.

[21] No calculation of embodied GHG emissions for new building construction will occur until the Australian Sustainable Finance Taxonomy calculation methodology and maximum allowance come into effect.
[22] Macquarie has confirmed to Sustainalytics that expenditures may include insulation to existing envelope components, including walls, roofs, basements and floors.
[23] Green Star: https://new.gbca.org.au/green-star/exploring-green-star/
[24] BREEAM: https://bregroup.com/products/breeam/
[25] LEED: https://www.usgbc.org/leed
[26] The expenses will be limited to financing or refinancing renovation costs.
[27] The expenses may include financing or refinancing related to renovation costs as well as the asset value of the building.
[28] Macquarie has confirmed to Sustainalytics that it may use the proceeds for financing pure play clean transportation businesses which derive at least 90% of their revenue from activities identified under this category. Sustainalytics acknowledges that the GBP and SBG favour project-based lending and financing, which provide more transparency in general than non-project-based lending, but notes that financing pure play companies through green financial instruments issued under the Framework is commonly accepted in the market as an approach which can generate positive impact.
[29] The mode of transport under freight transport includes road, rail and maritime freight shipping.

- Investment in the supporting infrastructure (such as charging stations, batteries or electrified rail) and supply chain manufacturing facilities related to electric or hydrogen-powered vehicles.
  - The private passenger transport manufacturing facilities to be financed under the Framework will be wholly dedicated towards the production of electric and hydrogen-powered vehicles.
  - The financing will exclude financing the following: i) the fossil fuel powered transport (including hybrid vehicles with internal combustion engines; ii) manufacturing of batteries for other applications other than for electric vehicles; iii) manufacturing of ancillary vehicle parts, such as frames and seats, and infrastructure, such as parking facilities, new construction or retrofitting of roads or bridges; and iv) the freight vehicles whose primary purpose is the transportation of fossil fuel freight.
- Investment in the public walking and cycling infrastructure.
- Sustainalytics considers investments under this category to be aligned with market practice.

– Sustainalytics notes that Macquarie has committed to ensuring that there is no double-counting of financed projects and assets across all allocation and impact reporting commitments made under the Framework.

- Project Evaluation and Selection:
  - Macquarie's Green Finance Working Group (GFWG) will have responsibility for the process of project evaluation and selection. Respective operating or central service groups at Macquarie will be responsible for the identification of projects in line with the Framework's eligibility criteria. The shortlisted potential projects will then be presented to GFWG, which will review and approve the eligibility of the projects under the Framework. The GFWG consists of representatives from the Treasury, Credit Risk, Environmental and Social Risk and Macquarie Asset Management Sustainability Green Analytics teams and/or any relevant operating or central service groups as required.
  - All eligible projects expected to be financed under the Framework are assessed according to Macquarie's group-wide Environmental and Social Risk (ESR) policy and ESR assessment tool during the investment decision process. Sustainalytics considers these environmental and social risk management systems to be adequate and aligned with market expectations. For additional detail, see Section 2.
  - Based on the process for project evaluation and selection and the presence of a risk management system, Sustainalytics considers this process to be in line with market practice.
- Management of Proceeds:
  - Macquarie's GFWG will be responsible for the management and allocation of proceeds. Macquarie will track and report the allocation of proceeds using a register of GFTs and eligible assets.
  - Macquarie has communicated to Sustainalytics that the GFTs issued under the Framework may include multi-tranche loan facilities. The Company intends to label only those tranches of such facilities whose proceeds will be allocated according to the eligibility criteria in the Framework.
  - Macquarie has confirmed to Sustainalytics that it commits to fully allocate the proceeds, on a best-effort basis, at issuance. During the tenure of a GFT, if an eligible green project falls off the pool of assets, Macquarie may reallocate the unallocated proceeds to other eligible green projects.
  - Pending full allocation or reallocation, unallocated proceeds may be temporarily invested in green bonds of other issuers or held in accordance with its liquidity management policy. Where a GFT is a green bond, in the unlikely case that a shortfall in eligible green projects persists beyond 24 months, Macquarie may explore options such as a cash tender offer to bondholders of the relevant green bonds.
  - Based on the commitment to fully allocate the proceeds to eligible green projects, use of an internal tracking system, the disclosure of the temporary use of proceeds and intent to buying back their green bonds in case of a permanent eligible projects shortfall, Sustainalytics considers this process to be in line with market practice.
  - In the unlikely event that participation in the cash tender offer is insufficient to remedy the shortfall and such green bonds remain outstanding, the remaining proceeds may cease to be allocated to the financing or refinancing of eligible green projects. As a result, 100% of the green

bonds proceeds may not be allocated to eligible green projects. In such a case, Sustainalytics considers the green bonds as not aligned with GBP.

- Reporting:
  - Macquarie commits to report on the allocation of proceeds in its Green Finance Report on its website on an annual basis where a GFT is outstanding and the use of proceeds from the GFT have been allocated in accordance with the Framework.
  - Macquarie has confirmed that if it obtains revolving credit facilities under the Framework, it will report on allocation until loan maturity.
  - Allocation reporting will include the amount allocated to eligible projects in aggregate, balance of any proceeds from any GFT that have not yet been allocated and examples of eligible projects.
  - Where feasible, Macquarie intends to report on the estimated environmental impacts of the use of proceeds using relevant impact metrics, such as renewable energy generation (in MWh), amount of energy saved (in MW), waste recycled (in tonnes), green buildings certification received or maintained, and other pollutant emissions to air avoided, such as NOx, SOx and particulates (in tonnes).
  - Based on the commitment to both allocation and impact reporting, Sustainalytics considers this process to be in line with market practice.

Alignment with the Green Bond Principles 2021 and Green Loan Principles 2023

Sustainalytics has determined that the Macquarie Green Finance Framework aligns with the four core components of the GBP and GLP.[30]

Section 2: Sustainability Strategy of Macquarie

Contribution to Macquarie's sustainability strategy

Sustainalytics is of the opinion that Macquarie demonstrates a commitment to sustainability through the development of an ESG approach structured around eight focus areas considered material to its stakeholders and business activities.[31] The following focus areas are particularly relevant to the Framework: i) climate change; ii) environmental and social financing, and risk management; iii) business conduct and ethics; and iv) community development.[32]

In 2021, Macquarie committed to aligning its financed emissions with the global objective of achieving net zero by 2050 and became a member of the Net-Zero Banking Alliance (NZBA).[33] To deliver its commitments as a member of the NZBA, Macquarie has set science-based emissions reduction targets in the following sectors: i) for residential mortgages Macquarie has set a 2030 interim target of 11.6–19.3 $kgCO_2e/m^2$ for Scope 1 and 2 which implies a 50–70% reduction in physical emissions intensity from the FY2021 baseline; ii) for oil/gas Macquarie is making progress towards its 2030 interim target of 56.3–59.6 gCO_2e/MJ for Scope 1, 2 and 3 which implies a 9–14% reduction in physical emissions intensity from the FY2020 baseline; iii) for motor vehicles Macquarie had set a 2030 interim target of 147 gCO_2e/km for Scope 1 and 2 which implies a 34% reduction in physical emissions intensity from the FY2020 baseline. BFS no longer originates new car loans and finance leases and the interim target when adopted had assumed that this business was ongoing. Macquarie's physical emissions intensity for this portfolio will be determined by the remaining vehicle mix as loans and leases run-off; and iv) for coal, Macquarie are on track to run-off its remaining on-balance sheet lending and equity exposures to the coal sector by the end of 2024.[34,35] Macquarie will outline its approach to all remaining material carbon-intensive sections in its next Net Zero and Climate Risk Report.

In 2022, Macquarie committed to achieving net zero emissions across its scope 1 and 2 emissions by 2025[36] and has developed a 2025 Sustainability Plan focusing on the environmental and social impacts of

[30] Macquarie may opt to buy back their green bonds to address shortfalls in eligible projects persisting beyond 24 months, which is in line with Green Bond Principles. In the unlikely event where the buy back is insufficient to address the shortfall and the proceeds remain unallocated, Sustainalytics considers such green bonds as not aligned with the Green Bond Principles. For more details, please refer to Management of Proceeds under Section 1.
[31] Macquarie, "Annual Report", (2024), at: https://www.macquarie.com/assets/macq/investor/reports/2024/macquarie-group-fy24-annual-report.pdf
[32] Ibid.
[33] Macquarie, "Net Zero and Climate Risk Report", (2023), at: https://www.macquarie.com/assets/macq/impact/esg/policies/net-zero-climate-risk-2023.pdf
[34] Macquarie, "Annual Report", (2024), at: https://www.macquarie.com/assets/macq/investor/reports/2024/macquarie-group-fy24-annual-report.pdf
[35] Macquarie, "Net Zero and Climate Risk Report", (2023), at: https://www.macquarie.com/assets/macq/impact/esg/policies/net-zero-climate-risk-2023.pdf
[36] Macquarie, "Annual Report", (2024), at: https://www.macquarie.com/assets/macq/investor/reports/2024/macquarie-group-fy24-annual-report.pdf

Macquarie's own business operations.[37] Within this plan, Macquarie aims to: i) source 100% renewable energy for global electricity needs in its operation in line with its RE100 commitment; ii) offset emissions through the purchase of carbon credits across scope 1 and 3 (business travel) emission categories; and iii) have its suppliers, representing 75% of its supplier-related emissions by 2030, set science-based emissions reduction target.[38] Further, as of March 2024, Macquarie invested or arranged AUD 2.4 billion (USD 1.6 billion)[39] in green energy assets and has 110GW of green energy assets in development, under construction or currently operating, measured using 100% of generating capacity for assets managed or owned (including partially) by Macquarie.[40]

Aiming to address some of the major transition challenges in the financial sector, Macquarie joined the UN Principles for Responsible Investment in 2015, became a member of the Sustainable Markets Initiative in 2021 and partnered with the UN's Green Climate Fund in 2022.[41]

Sustainalytics is of the opinion that the Macquarie Green Finance Framework is aligned with Macquarie's overall sustainability strategy and initiatives and will further Macquarie's action on its key environmental priorities.

Approach to managing environmental and social risks associated with the projects

Sustainalytics recognizes that proceeds from the instruments issued under the Framework will be directed towards eligible projects that are expected to have positive environmental impacts. However, Sustainalytics is aware that such eligible projects could also lead to negative environmental and social outcomes. Sustainalytics notes that Macquarie plays a limited role in the development of the specific projects that it finances, but by offering lending and financial services, it is exposed to environmental and social risks associated with the projects that it may finance or refinance. Some key risks associated with the eligible projects may include issues related to credit lending, land use and biodiversity issues associated with infrastructure development, occupational health and safety, business ethics and community relations.

Sustainalytics is of the opinion that Macquarie is able to manage or mitigate potential risks through implementation of the following:

- Macquarie has developed an ESR policy that establishes a process to identify, assess, manage, mitigate and report material environmental and social risks across its business. The policy lists the following requirements for transactions and onboarding clients: i) screening of clients for material environmental and social risks; ii) assessment, categorization, mitigation and management of environmental and social risks in new transactions, investments, products or services; iii) due diligence requirements; iv) escalated decision-making and approval processes, along with the credit approval process, for material environmental and social risks in accordance with international guidelines, such as the International Finance Corporation Performance Standards; and v) compliance with applicable environmental and social laws and regulations. The policy obligates regular monitoring and reporting of the environmental and social risk profiles.[42]
- To manage risks related to land use and biodiversity issues associated with infrastructure development, the Macquarie's ESR policy adopts a precautionary approach towards environmental risk. Through this policy, Macquarie's due diligence process considers the direct and indirect impacts and dependencies of its financed activities on biodiversity, natural resources, and environmentally sensitive and protected areas. The due diligence screening is guided by Macquarie's environmental and social risk assessment tool, which includes environmental and social impact assessments, human rights impact assessments and its related action plans.[43]
- To mitigate risks associated with occupational health and safety, Macquarie has developed the Work Health and Safety (WHS) Policy, which requires Macquarie to identify material WHS risks prior to making any investments. Macquarie conducts detailed due diligence, supported by subject matter experts and external advisors to identify such material risks. Furthermore, Macquarie operating groups have tailored safety alignment frameworks to drive consistent WHS principles and expectations for portfolio companies.[44]

[37] Macquarie, "2025 Sustainability Plan", (2024), at: https://www.macquarie.com/assets/macq/about/esg/policies/macquarie-group-2025-sustainability-plan.pdf
[38] Ibid.
[39] As per the AUD-USD conversion rate as on 22 August 2024.
[40] Macquarie, "Environment, Social and Governance", (2024), at: https://www.macquarie.com/assets/macq/about/esg/policies/macquarie-group-fy24-esg.pdf
[41] Macquarie, at: https://www.macquarie.com/au/en/about/company/environmental-social-and-governance.html
[42] Macquarie, "Environmental and Social Risk Policy Summary", (2024), at: https://www.macquarie.com/assets/macq/about/esg/policies/esr-policy-summary.pdf
[43] Ibid.
[44] Macquarie, "Environmental, Social and Governance: Managing environmental and social risk", at: https://www.macquarie.com/in/en/about/company/environmental-social-and-governance/managing-environmental-and-social-risk.html

- To address risks associated with business ethics, Macquarie has established a Code of Conduct, which includes measures to identify, mitigate and manage risks related to bribery and corruption, anti-money laundering, counterterrorism financing and data protection. Macquarie has also implemented a whistleblowing mechanism for its employees to proactively report unethical business conduct. To govern the adherence, Macquarie has set up human resource work health and safety teams, compliance teams, legal and governance teams, and regional financial crime risk teams, which regularly report to senior management and relevant board committees.[45]
- Regarding community relations, Macquarie collaborates with portfolio companies and conducts engagement activities to understand and assess the impacts of business activities and support the local communities through long-term partnerships. Macquarie also engages with its key stakeholders to identify and validate the ESG focus areas.[46]

Based on the above, Sustainalytics is of the opinion that Macquarie has implemented adequate measures and is well positioned to manage and mitigate environmental and social risks commonly associated with the eligible categories.

Section 3: Impact of Use of Proceeds

The use of proceeds categories are aligned with those recognized by the GBP and GLP. Sustainalytics has focused below on where the impact is specifically relevant in the local context.

Importance of financing renewable energy and green buildings globally

In 2022, global energy-related CO_2 emissions rose to more than 36.8 gigatonnes.[47] The largest absolute sectoral increase in emissions occurred in electricity and heat generation, with the sector's emissions increasing by 1.8% and reaching a record of 14.6 Gt in 2022.[48] According to the IEA's roadmap to achieve net zero emissions by 2050, increased supplies of clean energy combined with measures to save energy are needed to reduce CO_2 emissions in the energy sector.[49] By 2050, six technological avenues can achieve a reduction of 36.9 Gt in annual CO_2 emissions, one of which involves increasing the share of renewables.[50] To achieve 1.5°C target necessitates a cumulative investment of USD 150 trillion, translating to an average annual expenditure exceeding USD 5 trillion.[51] In 2022, investments in renewable energy reached nearly USD 0.5 trillion.[52] However, this amount represents only about one-third of the average annual investment required for renewables under the 1.5°C scenario.[53] Therefore, the renewables-based transition needs to accelerate.[54]

In 2021, the buildings and construction sectors accounted for approximately 34% of global energy demand and were responsible for 37% of energy- and process-related CO_2 emissions.[55] According to the UNEP, direct and indirect CO_2 emissions from the buildings sector would need to decline by 50% and 60%, respectively, by 2030 to align with the Paris Agreement's 1.5°C scenario.[56] In this regard, all new buildings and 20% of the world's existing building stock would need to eliminate carbon emissions by 2030. Furthermore, the energy consumption of buildings would need to be reduced by 25% by 2030 from a 2020 baseline to reach net zero emissions by 2050.[57,58] In 2020, investments in total energy efficiency amounted to USD 250 billion, with

[45] Macquarie, "Code of Conduct", (2023), at: https://www.macquarie.com/assets/macq/impact/esg/policies/Code%20of%20conduct.pdf
[46] Macquarie, "Environmental, Social and Governance: Managing environmental and social risk ", at: https://www.macquarie.com/in/en/about/company/environmental-social-and-governance/managing-environmental-and-social-risk.html
[47] IEA, "CO_2 Emissions in 2022", (2023), at: https://iea.blob.core.windows.net/assets/3c8fa115-35c4-4474-b237-1b00424c8844/CO2Emissionsin2022.pdf
[48] Ibid.
[49] IEA, "World Energy Outlook 2022", (2022), at: https://iea.blob.core.windows.net/assets/830fe099-5530-48f2-a7c1-11f35d510983/WorldEnergyOutlook2022.pdf
[50] IRENA, "World Energy Transition Outlook 2022: 1.5° C Pathway", (2022), at: https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Mar/IRENA_World_Energy_Transitions_Outlook_2022.pdf?rev=353818def8b34effa24658f475799464
[51] IRENA, "World Energy Transition Outlook 2023: 1.5° C Pathway", (2023), at: https://mc-cd8320d4-36a1-40ac-83cc-3389-cdn-endpoint.azureedge.net/-/media/Files/IRENA/Agency/Publication/2023/Jun/IRENA_World_energy_transitions_outlook_2023.pdf?rev=db3ca01ecb4a4ef8accb31d017934e97
[52] Ibid.
[53] Ibid.
[54] Ibid.
[55] UN Environment Programme, "Global Status Report for Buildings and Construction", (2022), at: https://wedocs.unep.org/bitstream/handle/20.500.11822/41133/Building_Construction_2022.pdf?sequence=3&isAllowed=y
[56] UN Environment Programme, "Building sector emissions hit record high, but low-carbon pandemic recovery can help transform sector", (2020), at: https://www.unep.org/news-and-stories/press-release/building-sector-emissions-hit-record-high-low-carbon-pandemic
[57] IEA, "Renovation of near 20% of existing building stock to zero-carbon-ready by 2030 is ambitious but necessary", (2022), at: https://www.iea.org/reports/renovation-of-near-20-of-existing-building-stock-to-zero-carbon-ready-by-2030-is-ambitious-but-necessary
[58] IEA, "Buildings", (2023), at: https://www.iea.org/reports/buildings

buildings contributing more than two-thirds of this sum.[59] The rate of improvement in energy intensity must rise nearly 2.5 times to 2.9% annually by 2050.[60] Given these projections, current efforts are lagging, highlighting an increasing necessity to expedite renovation rates.[61]

Based on the above, Sustainalytics is of the opinion that Macquarie's investments in renewable energy and green buildings under the Framework are expected to contribute to emissions reductions in the energy sector and building stock, thus advancing global decarbonization efforts and contributing to Macquarie's sustainability commitments.

Contribution to SDGs

The Sustainable Development Goals were adopted in September 2015 by the United Nations General Assembly and form part of an agenda for achieving sustainable development by 2030. The instruments issued under the Framework are expected to help advance the following SDGs and targets:

Use of Proceeds Category	SDG	SDG target
Renewable Energy	7. Affordable and Clean Energy	7.2. By 2030, increase substantially the share of renewable energy in the global energy mix
Energy Efficiency	7. Affordable and Clean Energy	7.3. By 2030, double the global rate of improvement in energy efficiency
Waste Management	12. Responsible Consumption and Production	12.5. By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
Sustainable Construction and Real Estate	9. Industry, Innovation and Infrastructure	9.4. By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
Sustainable Transportation	11. Sustainable Cities and Communities	11.2. By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

[59] IRENA, "World Energy Transitions Outlook 2022 1.5° C Pathway", (2022), at: https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Mar/IRENA_World_Energy_Transitions_Outlook_2022.pdf?rev=353818def8b34effa24658f475799464
[60] Ibid.
[61] Ibid.

Conclusion

Macquarie has developed the Macquarie Green Finance Framework under which it may issue bonds, loans and other debt or financing structures[62] and use the proceeds to finance or refinance eligible projects under the following categories, Renewable Energy; Energy Efficiency; Waste Management; Sustainable Construction and Real Estate; and Sustainable Transportation. Sustainalytics considers that the eligible projects are expected to deliver environmental benefits to support Macquarie's business strategy and vision.

The Macquarie Green Finance Framework outlines a process for tracking, allocation and managing of proceeds and makes commitments for reporting on allocation and impact. Sustainalytics considers that the Framework is aligned with the overall sustainability strategy of Macquarie and that the use of proceeds will contribute to the advancement of the UN Sustainable Development Goals 7, 9, 11 and 12. Additionally, Sustainalytics is of the opinion that Macquarie has adequate measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects.

Based on the above, Sustainalytics is confident that Macquarie is well positioned to issue bonds, loans and other debt or financing structures and that the Macquarie Green Finance Framework is robust, transparent and in alignment with the four core components of the Green Bond Principles 2021 and Green Loan Principles 2023.[63]

[62] Sustainalytics has reviewed only the financial instruments that are specified in the Framework.
[63] Macquarie may opt to buy back their green bonds to address shortfalls in eligible projects persisting beyond 24 months, which is in line with Green Bond Principles. In the unlikely event where the buy back is insufficient to address the shortfall and the proceeds remain unallocated, Sustainalytics considers such green bonds as not aligned with the Green Bond Principles. For more details, please refer to Management of Proceeds under Section 1.

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