



# FY2024 Basis of Preparation for ESG Reporting

31 March 2024

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# 1. Introduction

The purpose of this document is to set out the basis of preparation for key environmental, social and governance (ESG) metrics. The scope of this document is limited to those metrics covered by PwC's limited assurance engagement. These metrics are also contained within the Macquarie Group FY2024 ESG Report and FY2024 ESG Dataset, located at [www.macquarie.com/esg](http://www.macquarie.com/esg).

The metrics in scope of assurance are listed in [Section 2](#). The reporting boundaries, metric definitions, and measurement methodologies are set out in [Section 3](#).

Key terms noted in [blue](#) are defined in the Glossary found in [Appendix 1](#).

PwC's independent assurance report can be found in [Appendix 3](#).

## 2. Metrics covered

The table below shows the metrics covered by this document and the relevant sections in which they are covered.

Metric	Section
<b>Energy use and emissions in our own business operations</b>	
Energy use and Scope 1 and Scope 2 (market-based and location-based) emissions for the year ended 31 March 2024	3.1.1
Scope 3 operational GHG emissions Categories 1-6 and 8 for the year ended 31 March 2024	3.1.2
Management's assertion that carbon offsets have been purchased and retired for the year ended 31 March 2024 representing a quantity of greenhouse gas emissions offset equal to the sum of Scope 1, and Scope 3 Category 6: Business travel operational value chain emissions	3.1.3
Percentage of global electricity sourced from renewable energy in line with our RE100 commitment, for the year ended 31 March 2024	3.1.4
<b>Green energy asset financing activities</b>	
Total GW of green energy assets in development, under construction or currently operating as at 31 March 2024 measured using 100% of generating capacity for assets managed / owned (including partially) by Macquarie	3.2.1
Total \$Ab invested or arranged in green energy assets for the year ended 31 March 2024	3.2.2
<b>Environmental and Social Risk Policy review</b>	
Number of reviews completed under the Environmental and Social Risk (ESR) Policy for the year ended 31 March 2024	3.3.1

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## 3. Methodologies

### 3.1 Energy use and emissions in our own business operations

#### 3.1.1 Energy use and Scope 1 and Scope 2 (market-based and location-based) emissions for the year ended 31 March 2024

##### 3.1.1.1 Operational boundary for energy use and Scope 1 and Scope 2 greenhouse gas (GHG) emissions

###### i. Corporate offices and data centres

Macquarie corporate offices and data centres are defined as:

- Offices leased by Macquarie and its subsidiaries, which are also occupied by Macquarie people and have a net usable area (i.e., the area that can be fitted out by the tenant) of greater than 100m<sup>2</sup>.
- Data centres around the world where Macquarie has oversight of electricity usage and pays for this usage.
- New offices from business acquisitions from the month the acquisition is completed.

The following exclusions have been applied in determining the reporting boundary for corporate offices and data centres:

- Offices or buildings that are owned or managed by Macquarie but are not tenanted by Macquarie people.
- Serviced offices, data centres and cloud computing services used by Macquarie where Macquarie has no oversight of the energy usage of the office, data centre and cloud computing services. Energy costs for serviced offices are typically included as part of a service fee.
- Joint venture offices, defined as offices where Macquarie people may be located as part of a joint venture business activity but where Macquarie has limited ability to influence the operation of these offices and does not have oversight of the data required to calculate electricity consumption and GHG emissions.
- Properties associated with businesses acquired by Macquarie that are operationally segregated subsidiaries (OSSs) are excluded until such time as the associated lease obligations are renewed by Macquarie post-acquisition.

###### ii. Base buildings

Macquarie's base buildings are defined as: offices or buildings where Macquarie owns and occupies the building. Base building energy refers to the energy required to operate the mechanical plant and other services, such as lifts and lighting in the lobby and other communal areas.

The following exclusions have been applied in determining the reporting boundary for base buildings:

- Energy use in this category excludes tenanted energy use in Macquarie owned and operated buildings.
- OSSs.

##### 3.1.1.2 Process for calculating energy use and Scope 1 and Scope 2 GHG emissions

###### i. Scope 1 emissions: Direct emissions associated with diesel, natural gas, and refrigerant usage

Scope 1 emissions for the baseline reporting period are estimated by multiplying energy usage by relevant emissions factors from government or international sources.

Energy usage has been sourced directly from meter data, supplier, or building owner invoices, where available.

Approximately 71% of Scope 1 emissions data for the reporting period was obtained directly from actual meter usage data, supplier, or building owner invoices.

For diesel usage, where no tank meter readings were available, usage was estimated based on engine performance data from diesel generator data sheets. For natural gas, where no invoiced data was available, usage was estimated based on usage in comparable offices. For refrigerant gases, usage was estimated based on refrigerant charge and leakage rates in accordance with the *National Greenhouse and Energy Reporting (NGER) (Measurement) Determination 2008* (refer to [Appendix 2](#) for GHG emissions references).

Emission factors outlined in [Appendix 2](#) have then been applied to determine the equivalent direct emissions associated with diesel, natural gas and refrigerants consumed (Scope 1 emissions).

**ii. Scope 2 emissions: Indirect emissions associated with total electricity consumed**

Approximately 84% of the electricity usage data for the reporting period was obtained directly from the actual tenancy or building data, and the remaining 16% of energy consumption was estimated by one of the following prioritised data methodologies:

1. To account for seasonal variances, estimates are derived as follows:
  - Where a clear seasonal trend exists from previous reporting periods, the estimate is based on an extrapolation of these trends and adjusted for any year-on-year overall movements.
  - Where no clear seasonal trend exists from previous reporting periods, the actual figure for the same period in the prior year is used as the estimate.
2. Where invoiced data existed for part of the reporting period, the average daily invoiced electricity consumed for that part of the reporting period is determined and extrapolated out to the remainder of the reporting period. This method is used when some of the invoiced data within the reporting period is unavailable from the energy providers.
3. Where no invoiced data was available for a particular office, the electricity consumed for that office is estimated based on the net lettable area of the office and the average electricity consumption per square metre of other offices in the same region.

Grid emission factors outlined in [Appendix 2](#) have then been applied to determine the equivalent indirect emissions associated with electricity consumed using the Scope 2 location-based methodology.

For sites where renewable electricity has been purchased, either through utility contracts directly, or via building owners, or by purchasing of energy attribute certificates, an emissions factor of zero is applied to calculate Scope 2 market-based emissions.

### **3.1.2 Scope 3 operational GHG emissions Categories 1-6 and 8 for the year ended 31 March 2024**

#### **3.1.2.1 Operational boundary for Scope 3 GHG emissions from our own business operations**

**i. Category 1: Purchased goods and services (including Category 2: Capital goods, Category 4: Upstream transportation and distribution, and Category 8: Upstream leased assets)**

This category covers emissions arising from the procurement of goods and services (including capital goods, upstream transportation and distribution, and upstream leased assets) that are paid for via [Macquarie's](#) procurement system, and are categorised according to [Macquarie's](#) internal taxonomy codes. This excludes transactions not associated with the purchase of goods and services and capital goods where identifiable e.g., commissions or equivalent payments related to a financial transaction, which Macquarie considers to be outside of the procurement process, intra-company and payroll payments, community/charitable donations, and taxation-related spend.

Currently, due to data limitations, this category excludes capital expenditure on the development of our global headquarters 1 Elizabeth, Sydney, due to be completed in 2024. These offices will be included in Scope 1 and Scope 2 reporting from FY2025.

**ii. Category 2: Capital goods**

Given the capital goods spend data has been captured in the calculation methodology for Category 1, emissions related to Category 2 are not reported separately.

**iii. Category 3: Fuel- and energy-related activities**

This category covers emissions arising from the extraction, production and transportation of fuels and energy consumed (e.g., electricity, steam, heating, and cooling) by [Macquarie](#), including transmission and distribution (T&D) losses. Only electricity is included in the calculation as other fuels and energy are not material. It includes emissions from [Macquarie's](#) global corporate offices, data centres and base buildings (see [Section 3.1.1](#) for definition).

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iv. **Category 4: Upstream transportation and distribution**

Given the upstream transportation and distribution spend data has been captured in the calculation methodology for Category 1, emissions related to Category 4 are not reported separately.

v. **Category 5: Waste generated in operations**

This category covers emissions arising from the disposal and treatment of waste generated in operations.

It excludes e-waste, construction waste, and effluents and wastewater.

vi. **Category 6: Business travel**

This category covers emissions arising from business- travel, comprising air, hotel, taxis and car rental, and food and beverage. Food and beverage emissions capture meals purchased by our people when travelling, as well as other forms of food and beverage spend that may not be directly related to business travel (e.g., entertainment for our people or clients).

vii. **Category 8: Upstream leased assets**

Given the upstream leased assets spend data has been captured in the calculation methodology for Category 1, emissions related to Category 8 are not reported separately.

**3.1.2.2 Process for calculating Scope 3 operational GHG emissions from our own business operations**

i. **Category 1: Purchased goods and services (including Category 2: Capital goods, Category 4: Upstream transportation and distribution, and Category 8: Upstream leased assets)**

The “spend-based” method (as per the *GHG Protocol Scope 3 Guidance*, refer to [Appendix 2](#) for GHG emissions references) was used to calculate these emissions, with industry-average emissions factors applied based on the economic value of the goods and services (including capital goods, upstream transportation and distribution, and upstream leased assets) processed via [Macquarie’s](#) procurement system.

Spend data was extracted from [Macquarie’s](#) procurement system, which was categorised according to [Macquarie’s](#) internal taxonomy codes and uploaded to an emissions calculation platform where emissions factors were applied. This platform applies the *United States Environmentally-Extended Input-Output (USEEIO) dataset* that estimates cradle-to-gate GHG emissions for each given industry or product category (refer to [Appendix 2](#) for GHG emissions references).

The corresponding USEEIO emissions factors were mapped against [Macquarie’s](#) internal taxonomy and then applied to calculate overall emissions for this category. A weighted average emissions factor was applied for any uncategorised spend.

The latest USEEIO release provides data through to 2018 with emissions factors denominated in \$US. These were translated to the relevant period (i.e., to [Macquarie](#) FY2024) using inflationary indices and then to the relevant currency (i.e., from \$US to \$A) using the period average exchange rate.

$Emissions = \sum (Spend\ by\ category \times converted\ emissions\ factor\ (Ef)\ by\ category)$

ii. **Category 2: Capital goods**

Capital goods are included under Category 1, as described above.

iii. **Category 3: Fuel- and energy-related activities**

As discussed above, Category 3 covers emissions arising from the extraction, production and transportation of fuels and energy consumed (e.g., electricity, steam, heating and cooling) by [Macquarie](#), including transmission and distribution (T&D) losses. Usage is based on invoice data from energy retailers or building owners, where available, or estimated based on comparable offices. For energy consumed in Australia, state-level emissions factors were used, based on the *Australian National Greenhouse Accounts Factors* published by the Department of Climate Change, Energy, the Environment and Water (2022 and 2023) (refer to [Appendix 2](#) for GHG emissions references). For energy consumed outside of Australia, emissions factors by country were used based on the *UK Government GHG Conversion Factors for Company Reporting*, Department for Environment, Food & Rural Affairs (DEFRA) Emissions Factors (2023) (refer to [Appendix 2](#) for GHG emissions references).

$Emissions = \sum (Quantity\ of\ electricity\ purchased\ by\ state/country \times Ef\ by\ state/country)$

iv. **Category 4: Upstream transportation and distribution**

Upstream transportation and distribution are included under Category 1, as described above.

v. **Category 5: Waste generated in operations**

Data for waste generated in operations has been sourced directly from building owners or cleaning provider reports, where available.

For sites representing approximately 51% of our people (Sydney: No.1 Martin Place, 50 Martin Place, 1 Shelley St and London: Ropemaker), waste data was obtained directly from building owners or cleaning provider reports.

For offices where no waste data was available, data was extrapolated using tonnes/FTE from sites where data was available and headcount in those remaining offices. The headcount number excludes Macquarie people on extended leave, people at non-Macquarie offices, people who work remotely on a permanent basis, consultants who are not expected to work in a Macquarie office, casual people, and Non-Executive Directors. Emissions factors are based on the UK Government GHG Conversion Factors for Company Reporting, DEFRA Emissions Factors (2023) (refer to Appendix 2 for GHG emissions references).

vi. **Category 6: Business travel**

**Air**

Air emissions are calculated for air-travel bookings at the time bookings are made through our corporate travel agency by applying emissions factors specified by DEFRA.

Macquarie calculates air emissions (tCO<sub>2</sub>e) based on the distance per flight segment booked, with the emissions factor determined by class of ticket, flight haul type, and origin and destination countries, with reference to emissions factors specified by DEFRA for the relevant period. Corporate travel agency data is used to determine distance, class of ticket, flight haul type, and origin and destination countries.

$$\text{Emissions} = \sum(Ef_i \times \text{Distance}_i)$$

**Hotel, taxis and car rental, and food and beverage**

Hotel, taxi and car rental, and food and beverage emissions are calculated based on spend on corporate cards.

Emissions factors for the relevant reporting period are based on government or international sources, to determine the equivalent indirect emissions associated with hotel, taxis and car rental, and food and beverage spend and associated activity data.

Emissions (tCO<sub>2</sub>e) are estimated as follows:

- **Hotel:** emission calculations are based on total hotel spend at a particular hotel and the average daily rate per Business Travel News' *Corporate Travel Index* (2023) to estimate room nights based on location, with reference to Smith Travel Research's database to identify the class of service for each hotel. The emissions factor is determined by class of hotel service and property location per the *Cornell Hotel Sustainability Benchmark Index* (2023).

$$\text{Emissions} = \sum(Ef_i \times \text{Estimated room nights}_i)$$

- **Taxi and car rental:** emission calculations are based on spend on taxis, car rentals and ride shares, where the average distance travelled is determined with reference to Numbeo's report of *Price Rankings by Country of Taxi 1km (Normal Tariff) (Transportation)* (2023). The emissions factor is based on car type, as determined by Macquarie's corporate card provider using its internally developed codes, and DEFRA conversion factors (2023) (refer to Appendix 2 for GHG emissions references).

$$\text{Emissions} = \sum(Ef_i \times \text{Distance}_i)$$

- **Food and beverage:** emissions calculations are based on spend by restaurant category and United States Environmental Protection Agency factors (2023) (refer to Appendix 2 for GHG emissions references). Restaurant category is determined by Macquarie's corporate card provider.

$$\text{Emissions} = \sum(Ef_i \times \text{Spend}_i)$$

vii. **Category 8: Upstream leased assets**

Upstream leased assets are included under Category 1, as described above.



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### **3.1.3 Management's assertion that carbon offsets have been purchased and retired representing a quantity of greenhouse gas emissions offset equal to the sum of Scope 1, and Scope 3 Category 6: Business travel operational value chain emissions for the year ended 31 March 2024**

To meet the existing carbon offsetting commitment within our *2025 Sustainability Plan* which covers Scope 1 and Scope 3 Category 6: Business travel emissions, [Macquarie](#) will purchase and retire a portfolio of Australian Carbon Credit Units and other voluntary carbon offsets by 30 June 2024. Leveraging our internal due diligence processes, offset projects are selected based on quality and verifiability of emissions reductions. We have also engaged an independent third-party to assist with the evaluation and selection of suitable offset projects. Our choice of offsets considers emerging guidance provided by the Science Based Targets initiative (SBTi) *Corporate Net Zero Standard*, Net-Zero Banking Alliance *Supporting note: The Use of Carbon Credits in Climate Target Setting*, and *The Oxford Principles for Net Zero Aligned Carbon Offsetting*.

### **3.1.4 Percentage of global electricity sourced from renewable energy in line with our RE100 commitment for the year ended 31 March 2024**

In line with [Macquarie's RE100](#) commitment within our *2025 Sustainability Plan*, [Macquarie](#) has sourced the equivalent of 100% of our electricity consumption from renewable sources through a combination of renewable energy from building owners or utilities (47%) and energy attribute certificates (53%). Energy attribute certificates will be retired by 30 June 2024.

Based on [RE100](#) boundary criteria, the equivalent of our FY2024 electricity consumption sourced from renewable sources is 98.8% due to insufficient renewable energy certificates in the South Korean market.

## 3.2 Green energy asset financing activities

### 3.2.1 Total GW of green energy assets in development, under construction or currently operating as at 31 March 2024 measured using 100% of generating capacity for assets managed / owned (including partially) by Macquarie

#### 3.2.1.1 Boundary for GW of green energy assets

This metric covers Macquarie and its subsidiaries, including OSSs and Macquarie Asset Management's (MAM) private markets portfolio companies.<sup>1</sup> These are collectively referred to as MGL in this section unless otherwise stated.

#### 3.2.1.2 Process for GW of green energy assets

Gigawatts (GW) of green energy assets represents the total energy generation capacity and storage system power capacity<sup>2</sup> of the green energy assets on MGL's balance sheet or under MGL management as at 31 March 2024. It excludes lending and private credit funds. GWs are measured using the 100% energy generation capacity and storage system power capacity of each asset, not the proportion owned/managed by MGL.

Energy generation capacity and storage system power capacity is disclosed by three stages in the asset life cycle: in development; under construction; or currently operating.

#### 3.2.1.3 Recognition criteria for GW of green energy assets

An asset is defined to be:

- "In development" if MGL or any portfolio company of a Macquarie managed fund has:
  - (i) internally approved the commitment to allocate a meaningful amount of resources (e.g., people or funding) to assessing an asset's/portfolio of assets' feasibility, or made a partnering commitment to pursue an asset/portfolio of assets that is not yet "under construction"; or
  - (ii) obtained site control for a particular asset/portfolio of assets.

"In development" excludes those assets that are no longer active at the reporting date, as well as assets "under construction" or assets that are "currently operating".

- "Under construction" when it is approved through a Final Investment Decision (FID). FID is the point in the capital project planning process when the decision is taken to make major financial commitments, which will provide the funding required to commence and complete the construction to create an operational asset.
- "Currently operating" when it has reached Commercial Operation Date (COD). COD is the point in time when the asset is fully commissioned, placed into service, and all relevant parties are satisfied that it is operating as intended.

### 3.2.2 Total \$Ab invested or arranged in green energy assets for the year ended 31 March 2024

In previous reporting periods, this metric was described as also including amounts that MGL had *committed* to invest in green energy assets for the year, and represented amounts that had been internally approved. As reporting matures, we have shifted towards only reporting amounts related to legally binding obligations, which are less subject to variability. No material changes to prior year reported amounts have been identified as a result of this change in approach.

#### 3.2.2.1 Boundary for \$Ab invested or arranged in green energy assets

This metric covers Macquarie and its subsidiaries, including OSSs, and MAM's private markets portfolio companies.<sup>3</sup> These are collectively referred to as MGL in this section unless otherwise stated.

<sup>1</sup> MAM private market portfolio companies includes those under MAM's Real Assets division (including MAM Green Investments), and MAM's private credit business. However, this metric explicitly excludes capacity of green energy assets that are financed through lending and private credit funds, and therefore green energy assets financed through MAM's private credit business are excluded from this metric.

<sup>2</sup> Storage system power capacity of batteries in electric vehicles financed through our Banking and Financial Services Car Loans business is excluded from this metric.

<sup>3</sup> MAM private market portfolio companies includes those under MAM's Real Assets division (including MAM Green Investments), and MAM's private credit business.

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### 3.2.2.2 Process for \$Ab invested or arranged in green energy assets

The amount invested or arranged in [green energy assets](#) is made up of:

- Lending and equity investment made by MGL in [green energy assets](#) for the year ended 31 March 2024. This includes electric vehicle financing (loans and novated leases) by our Banking and Financial Services (BFS) Car Loans business, but excludes other short-term funding such as trading positions;
- Lending and equity arranged by MGL for [green energy assets](#) for the year ended 31 March 2024. Equity arranged is captured where MGL has:
  - (i) invested equity into the asset as a joint lead or lead sponsor or as part of a consortium; and
  - (ii) played an instrumental role in raising additional third-party financing for the asset.

If both criteria are met, 100% of the “arranged” third-party funding is included.

### 3.2.2.3 Recognition criteria for \$Ab invested or arranged in green energy assets

For our BFS business (in Car Loans), Commodities and Global Markets (CGM) business (in Specialised and Asset Finance and in Commodity Markets and Finance), funding is only included when it has been drawn. For MAM’s Real Assets funds, funding is only included when it has been drawn, based on the latest available quarterly reports.

For other MAM private markets portfolio companies and our Macquarie Capital business, funding is considered “invested” or “arranged” at the point when a legally binding obligation has been entered into.

### 3.3 Environmental and Social Risk Policy reviews

#### 3.3.1 Number of reviews completed under the Environmental and Social Risk (ESR) Policy for the year ended 31 March 2024

Environmental and social risks are managed through the implementation of the *Environmental and Social Risk (ESR) Policy*.

Macquarie's ESR Policy describes our approach to ESR management when onboarding or reviewing clients and other counterparties and across a broad range of transactions including equity investments, financing, leasing and advisory mandates. The ESR Policy provides a process to assess, manage, mitigate, monitor and report environmental and social risks and takes a precautionary approach to ESR issues including labour and employment practices, climate change, human rights, resource efficiency, pollution prevention, biodiversity and cultural heritage. Based on international guidelines, including the International Finance Corporation Performance Standards, the ESR Policy provides escalated decision-making and approval processes, alongside the credit approval process, for material environmental and social risks. Material environmental and social risks are determined by the nature, size and complexity of the transaction, as well as the jurisdiction, sector, client and project-level risk.

##### 3.3.1.1 Coverage

The *ESR Policy* applies to Macquarie and its subsidiaries. It outlines the circumstances under which counterparties and transactions trigger an ESR review.

##### 3.3.1.2 Process

Reviews are conducted over transactions and counterparties and must be completed between 1 April 2023 and 31 March 2024. They are considered completed if:

- Review outcome (i.e. approved, approved with conditions, or declined) for the transaction or counterparty was issued by the ESR team; or
- Transaction was assessed using Macquarie's ESR toolkit and found to be of low environmental and social risk, not requiring a referral to the ESR team.

**Transactions** are defined as equity and fund investments, financing/lending, leasing, physical commodities trading, capital markets with underwriting, environmental and social products, and advisory mandates.

Advisory mandates consist of:

- Mandates where Macquarie earns revenue through its role as advisor on corporate transactions, including mergers and acquisitions, divestments, takeover responses, debt and equity financing, capital management and restructuring;
- Equity and debt capital market transactions without underwriting; or
- Introducer roles and similar structures.

**Counterparty reviews** are defined as standalone counterparty ESR reviews i.e., not being part of a transaction but as part of periodic risk assessments on counterparties that meet *ESR Policy* escalation requirements. These reviews occur as part of initial client onboarding, annual credit reviews, periodic "know your client" refreshes and ad-hoc reviews of negative news alerts.

##### i. Sector split

Sectors are chosen from a pre-determined ESR sector list and selected based on the sector of risk. This is the sector from the mandatory and reputation escalation lists or medium and high-risk sectors within Macquarie's *ESR Policy* which triggered the referral to the ESR team.

If the referral was triggered for reasons unrelated to the sector list (e.g., credible allegations or evidence of Human Rights breaches or significant impacts on environmentally sensitive or protected areas), the sector is determined as that from which the majority of the revenue generated by the counterparty or entity that is subject of the review is derived.

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# Appendix 1: Glossary

## Green energy assets

Macquarie's definition of green energy assets for the purpose of the ESG Report, is made up of:

- Established renewable energy technologies such as solar, wind, hydro or geothermal energy;
- Emerging green energy technologies including green hydrogen and renewable natural gas;
- Waste-to-energy and bioenergy assets;
- Energy efficiency technologies such as smart meters, energy efficient lighting, biomass boilers and ground and air source heat pumps;
- Low carbon transport, including electric vehicles; or
- Supporting infrastructure for the above assets, e.g., battery storage and electric vehicle charging infrastructure.

## Macquarie

Macquarie Group Limited and its subsidiaries

## Macquarie people

Total global workforce excluding people employed in [OSSs](#).

## Operationally segregated subsidiaries (OSSs)

The operations of some controlled subsidiaries are "segregated" from the rest of [Macquarie](#), and a tailored Risk Management Framework may be adopted.

## RE100

A global corporate renewable energy initiative which brings together businesses that source the equivalent of 100% renewable electricity for their operations.

## Scope definitions

The below definitions are based on the Greenhouse Gas Protocol's *FAQ* (for Scope 1 and Scope 3 definitions) and the Greenhouse Gas Protocol's *GHG Protocol Scope 2 Guidance* (for Scope 2 definition):

- Scope 1 emissions: direct emissions from owned or controlled sources.
- Scope 2 emissions: indirect emissions from the generation of purchased energy. There are two methods used to calculate Scope 2 emissions:
  - a) Market-based: Reflects emissions from electricity that companies have purposefully chosen (or their lack of choice). It derives emission factors from contractual instruments, which include any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation, or for unbundled attribute claims.
  - b) Location-based: Calculated using the average emissions intensity of grids on which energy consumption occurs (using mostly grid-average emission factor data).

Scope 3 emissions: all indirect emissions (not include in Scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.

## Appendix 2: GHG emissions references

Table 1 – GHG emissions references

The following documents have been referenced in calculating Scope 1, Scope 2 and Scope 3 GHG emissions (tCO<sub>2</sub>e). Most recent year's emissions factors are used from each of these sources. For Scope 2, and Scope 3 Category 3, where external factors change across the period of the Macquarie financial year, the relevant factor is allocated to each month.

Component	Reference documents
<b>Australia Electricity, Natural Gas, Refrigerants &amp; Diesel</b>	<ul style="list-style-type: none"> <li>- Australian Government - Department of Climate Change, Energy, the Environment and Water: <i>National Greenhouse and Energy Reporting (Measurement) Determination 2008</i> and subsequent amendments for the calculation of greenhouse gas (GHG) emissions (2022 and 2023)</li> </ul>
<b>New Zealand Electricity</b>	<ul style="list-style-type: none"> <li>- NZ Ministry for the Environment: <i>Measuring emissions: A guide for organisations</i> (2022)</li> </ul>
<b>Taiwan, Japan &amp; Hong Kong Electricity</b>	<ul style="list-style-type: none"> <li>- Taiwan - Bureau of Energy, Ministry of Economic Affairs (2022)</li> <li>- Japan - Japan Ministry of Environment (2021)</li> <li>- Hong Kong - CLP and HKE Annual reports (2022)</li> </ul>
<b>United Kingdom Electricity &amp; Natural Gas</b>	<ul style="list-style-type: none"> <li>- Department for Environment Food and Rural Affairs (DEFRA): <i>UK Government GHG Conversion Factors for Company Reporting</i> (2023)</li> </ul>
<b>United States Electricity Natural Gas &amp; Diesel</b>	<ul style="list-style-type: none"> <li>- United States Environmental Protection Agency (USEPA): <i>Emissions &amp; Generation Resource Integrated Database (eGRID)</i> (2021) published Jan 2023</li> <li>- Australian Government - Department of Climate Change, Energy, the Environment and Water: <i>National Greenhouse and Energy Reporting (Measurement) Determination 2008</i> and subsequent amendments for the calculation of greenhouse gas (GHG) emissions (2023)</li> </ul>
<b>Canada Electricity</b>	<ul style="list-style-type: none"> <li>- The Climate Registry Information System (CRIS) (2023)</li> </ul>
<b>Brazil, Chile, China, India, Indonesia, Mexico, Philippines, Singapore, South Korea, Thailand &amp; UAE Electricity</b>	<ul style="list-style-type: none"> <li>- Institute for Global Environmental Strategies (IGES): <i>IGES List of Grid Emission Factors</i> (2023)</li> </ul>
<b>Austria, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Spain &amp; Switzerland Electricity</b>	<ul style="list-style-type: none"> <li>- Association of Issuing Bodies (AIB): <i>European Residual Mixes</i> (2022)</li> </ul>
<b>Malaysia Electricity Diesel</b>	<ul style="list-style-type: none"> <li>- Institute for Global Environmental Strategies (IGES): <i>IGES List of Grid Emission Factors</i> (2023)</li> <li>- Australian Government - Department of Climate Change, Energy, the Environment and Water: <i>National Greenhouse and Energy Reporting (Measurement) Determination 2008</i> and subsequent amendments for the calculation of greenhouse gas (GHG) emissions (2023)</li> </ul>

Component	Reference documents
<b>Scope 3 Category 1: Purchased goods and services (including capital goods, upstream leased assets, and upstream transportation and distribution)</b>	<ul style="list-style-type: none"> <li>- World Resources Institute (WRI) / World Business Council for Sustainable Development (WBCSD): <i>GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (v1): Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard</i> (2013) and</li> <li>- GHG protocol Technical Guidance on the EEIO model via GHG Protocol Scope 3 Calculation Guidance and associated Life Cycle Database reference of third-party Databases</li> <li>- United States Environmental Protections Agency (USEPA): United States Environmentally Extended Input Output (USEEIO) dataset that estimates cradle to gate GHG emissions for each given industry or product category (2018)</li> </ul>
<b>Scope 3 Category 3: Fuel and energy-related activities</b>	<ul style="list-style-type: none"> <li>- Australia state based: Australian Government - Department of Climate Change, Energy, the Environment and Water: <i>National Greenhouse and Energy Reporting (Measurement) Determination 2008 and subsequent amendments for the calculation of greenhouse gas (GHG) emissions</i> (2023)</li> <li>- Rest of world: Department for Environment Food and Rural Affairs (DEFRA): <i>UK Government GHG Conversion Factors for Company Reporting</i> (2023)</li> </ul>
<b>Scope Category 5: Waste in operations</b>	<ul style="list-style-type: none"> <li>- Department for Environment Food and Rural Affairs (DEFRA): <i>UK Government GHG Conversion Factors for Company Reporting</i> (2023)</li> </ul>
<b>Scope 3 Category 6: Business travel Air &amp; Ground Hotel Food &amp; Beverage</b>	<ul style="list-style-type: none"> <li>- Department for Environment Food and Rural Affairs (DEFRA): <i>Government Greenhouse Gas Conversion Factors for Company Reporting: Methodology Paper for Conversion Factors</i> (2023)</li> <li>- The Business Travel News (BTN) Corporate Travel Index and Smith Travel Research (STR): <i>Cornell Hotel Sustainability Benchmarking Index (CHSB Index)</i> (2023)</li> <li>- United States Environment Protection Agency (USEPA) Office of Research and Development: <i>Supply Chain Greenhouse Gas Emission Factors for US Industries and Commodities</i></li> </ul>

Scope 2 emissions factors used for Australian and The Americas offices, and Scope 3 emissions factors for all business travel, include greenhouse gases in addition to carbon dioxide and are expressed in carbon dioxide equivalents (CO<sub>2</sub>e) as stipulated within the associated reference documents. Scope 2 emission factors used for the United Kingdom and remaining office locations only comprise carbon dioxide emissions (CO<sub>2</sub>) as stipulated within the reference documents. The jurisdictional variance in approaches to Scope 2 methodology had no material effect on the outcome.

# Appendix 3: Independent assurance report over selected environmental, social and governance data reported by Macquarie Group Limited for the 12 months ended 31 March 2024





To the Directors of Macquarie Group Limited

Independent Limited Assurance Report on identified Subject Matter  
Information in Macquarie Group Limited's FY2024 ESG Report ('the Report')  
and the FY2024 ESG Dataset ('the Dataset')

The Directors of Macquarie Group Limited ('Macquarie' or 'MGL') and its subsidiaries (together 'the Group' or 'Macquarie Group') engaged us to perform an independent limited assurance engagement in respect of the identified subject matter information listed below and identified within the Report and/or the Dataset for the years ended or as at, as specified below (the 'Subject Matter Information').

### Subject Matter Information and Criteria

The Subject Matter Information is as set out below:

**Table 1 – Subject Matter Information for the year ended 31 March 2024**

	Title	Amount	Reference
a)	Total energy use	150 TJ	Dataset: Tab 4*
b)	Total electricity consumed from MGL's corporate offices, data centres and base building consumption around the world (where MGL owns and occupies the building)	39.9 GWh	Report: Page 65
c)	Total Scope 1 direct emissions from diesel, natural gas and refrigerants usage from MGL's corporate offices and base building consumption around the world (where MGL owns and occupies the building)	392 tCO <sub>2</sub> e	Report: Page 65 Dataset: Tab 4*
d)	Scope 2 indirect emissions from electricity usage from MGL's corporate offices, data centres and base building consumption around the world (where MGL owns and occupies the building) (market-based) as:  (i) corporate offices and data centres; (ii) base building; and (iii) total of (i) and (ii) above	(i) 0 tCO <sub>2</sub> e (ii) 0 tCO <sub>2</sub> e (iii) 0 tCO <sub>2</sub> e	Dataset: Tab 4*

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	Title	Amount	Reference
e)	<p>Scope 2 indirect emissions from electricity usage from MGL's corporate offices, data centres and base building consumption around the world (where MGL owns and occupies the building) (location-based) as:</p> <p>(i) corporate offices and data centres; (ii) base building; (iii) total of (i) and (ii) above</p>	<p>(i) 20,336 tCO<sub>2</sub>e (ii) 1,172 tCO<sub>2</sub>e (iii) 21,508 tCO<sub>2</sub>e</p>	Dataset: Tab 4*
f)	<p>Management's assertion that carbon offsets have been purchased and retired representing a quantity of greenhouse gas emissions offset equal to the sum of c) Scope 1 and k) Scope 3 Category 6: Business travel</p>	N/A	<p>Scope 1 emissions - Report: Page 65 Dataset: Tab 4*</p> <p>Scope 3: Category 6: Business Travel emissions - Report: Page 66 Dataset: Tab 4*</p>
g)	Percentage of global electricity sourced from renewable power based on RE100 boundary criteria, in line with Macquarie's RE100 commitment	98.8%	Report: Page 65
h)	Scope 3 Category 1: Purchased goods and services (including Category 2, 4 and 8)	156,018 tCO <sub>2</sub> e	Report: Page 66 Dataset: Tab 4*
i)	Scope 3 Category 3: Fuel and energy related activities	3,631 tCO <sub>2</sub> e	Report: Page 66 Dataset: Tab 4*
j)	Scope 3 Category 5: Waste generated in operations	239 tCO <sub>2</sub> e	Report: Page 66 Dataset: Tab 4*
k)	Scope 3 Category 6: Business travel	63,122 tCO <sub>2</sub> e	Report: Page 66 Dataset: Tab 4*
l)	\$ invested or arranged in green energy assets	\$2.4 billion	Report: Page 62 Dataset: Tab 3*
m)	Number of reviews completed under the Environmental and Social Risk ('ESR') Policy	961 reviews	Report: Page 56 Dataset: Tab 1*
* Tab 1: ESRM, Tab 3: ES Financing, Tab 4: Sustainability in our own BO			



**Table 2 – Subject Matter Information as at 31 March 2024**

	Title	Amount	Reference
n)	GW capacity of green energy assets in development, under construction or currently operating, as at 31 March 2024 measured using 100% of generating capacity for assets managed / owned (including partially) by Macquarie	110 GW	Report: Page 62 Dataset: Tab 3*
*Tab 3: ES Financing			

**Table 3 – Subject Matter Information for the years ended 31 March 2023 and 31 March 2022**

	Title	Amount	Reference
o)	Indirect emissions from electricity usage (Scope 2) from MGL's corporate offices, data centres and base building consumption around the world (where MGL owns and occupies the building) (location-based) as:  (i) corporate offices and data centres (ii) base building; and (iii) total of (i) and (ii)	(i) FY23: 21,962 tCO <sub>2</sub> e FY22: 22,822 tCO <sub>2</sub> e (ii) FY23: 1,117 tCO <sub>2</sub> e FY22: 1,110 tCO <sub>2</sub> e (iii) FY23: 23,079 tCO <sub>2</sub> e FY22: 23,932 tCO <sub>2</sub> e	Dataset: Tab 4*
*Tab 4: Sustainability in our own BO			

The criteria used by Macquarie to prepare the Subject Matter Information ('the Criteria') are established by Macquarie management ('Management'). The Criteria are outlined in the FY2024 Basis of Preparation for ESG Reporting, and along with the Subject Matter information, are located at <https://www.macquarie.com/au/en/about/company/environmental-social-and-governance.html>, as at 3 May 2024.

We assessed the Subject Matter Information against the Criteria. The Subject Matter Information needs to be read and understood together with the Criteria.

The maintenance and integrity of Macquarie's website is the responsibility of Management; the work carried out by us does not involve consideration of these matters and, accordingly, we accept no responsibility for any changes that may have occurred to the reported Subject Matter Information or Criteria when presented on Macquarie's website.

Our assurance conclusion is with respect to the years ended or as at, as specified in Tables 1, 2 and 3 above and does not extend to information in respect of earlier periods, except where otherwise stated, or to any other information included in, or linked from, the Report and the Dataset including any images, audio files or videos.



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## Responsibilities of Management

Management is responsible for the preparation of the Subject Matter Information in accordance with the Criteria. This responsibility includes:

- Determining appropriate reporting topics and selecting or establishing suitable criteria for measuring, evaluating and preparing the underlying Subject Matter Information;
- Ensuring that those Criteria are relevant and appropriate to Macquarie and the intended users; and
- Designing, implementing and maintaining systems, processes and internal controls over information relevant to the evaluation or measurement of the Subject Matter Information, which is free from material misstatement, whether due to fraud or error. Our independence and quality control

We have complied with the ethical requirements of the Accounting Professional and Ethical Standard Board's APES 110 *Code of Ethics for Professional Accountants (including Independence Standards)* relevant to assurance engagements, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies Australian Standard on Quality Management ASQM 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Reports and Other Financial Information, or Other Assurance or Related Services Engagements*, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

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## Our responsibilities

Our responsibility is to express a limited assurance conclusion based on the procedures we have performed and the evidence we have obtained.

Our engagement has been conducted in accordance with the Australian Standard on Assurance Engagements (ASAE) 3000 *Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* and ASAE 3410 *Assurance Engagements on Greenhouse Gas Statements*. Those standards require that we plan and perform this engagement to obtain limited assurance about whether anything has come to our attention to indicate that the Subject Matter Information has not been prepared, in all material respects, in accordance with the Criteria, for the years ended or as at, as specified in Tables 1, 2 and 3 above.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement and consequently the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Accordingly, we do not express a reasonable assurance opinion.



In carrying out our limited assurance engagement we:

- Enquired of relevant management of the Group regarding the processes and controls for capturing, collating, calculating and reporting the Subject Matter Information;
- Calculated the arithmetic accuracy of a sample of calculations of the Subject Matter Information;
- Assessed the appropriateness of the greenhouse gas emission factors and methodologies applied in calculating the Subject Matter Information;
- Assessed the appropriateness of estimates and assumptions applied by management in the preparation of the Subject Matter Information;
- Agreed the Subject Matter Information to underlying data sources and calculations;
- Undertook analytical procedures over the performance data utilised within the calculations and preparation of the Subject Matter Information;
- Agreed a sample of external data used in the estimation and attribution of operational Scope 3 emissions to third party sources;
- Performed procedures over the compilation of data used in calculating the metric disclosed for GW capacity of green energy assets as at 31 March 2024 measured using 100% generating capacity for assets managed/owned (including partially) by Macquarie;
- Performed procedures over the calculation of \$ billion invested or arranged in green energy assets;
- Agreed the number of reviews completed under the ESR Policy to underlying sources; and
- Reviewed the presentation and disclosure of the Subject Matter Information in the Report and the Dataset.

The Subject Matter Information includes an offset deduction from Macquarie's emissions for the year ended 31 March 2024 of 63,514 tonnes of CO<sub>2</sub>e. We have performed procedures as to whether these offsets were acquired during the year (or, when actual emissions are unknown before the year end, up until the issuance of the assurance report post year end) and arrangements are in place for their surrender, and whether the description of them in the Subject Matter Information is a reasonable summary of the relevant contracts and related documentation as well as performed procedures over the calculation of net emissions. We have not, however, performed any procedures regarding the external providers of these offsets, and express no conclusion about whether the offsets have resulted, or will result, in a reduction of 63,514 tonnes of CO<sub>2</sub>e.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.



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### **Inherent limitations**

Inherent limitations exist in all assurance engagements due to the selective testing of the information being examined. It is therefore possible that fraud, error or non-compliance may occur and not be detected. A limited assurance engagement is not designed to detect all instances of non-compliance of the Subject Matter with the Criteria, as it is limited primarily to making enquiries of Management and applying analytical procedures.

Additionally, non-financial data may be subject to more inherent limitations than financial data, given both its nature and the methods used for determining, calculating and estimating such data. The precision of different measurement techniques may also vary. The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, evaluation and measurement techniques that can affect comparability between entities and over time. In addition, Greenhouse Gas (GHG) quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases.

Our scope did not include performing assurance procedures over the underlying data provided by third parties.

In particular, it is acknowledged by stakeholders globally, including regulators, that there are significant limitations in the availability and quality of emissions data from third parties, resulting in the extensive use of proxy data.

The limited assurance conclusion expressed in this report has been formed on the above basis.

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### **Our limited assurance conclusion**

Based on the procedures we have performed, as described under 'Our responsibilities' and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Subject Matter Information has not been prepared, in all material respects, in accordance with the Criteria for the periods specified in Tables 1, 2 and 3 above.

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### **Use and distribution of our report**

We were engaged by the board of directors of Macquarie on behalf of Macquarie to prepare this independent limited assurance report having regard to the Criteria, specified by Management. The Criteria are outlined in the FY2024 Basis of Preparation for ESG Reporting located at <https://www.macquarie.com/au/en/about/company/environmental-social-and-governance.html>, as at 3 May 2024.

This report was prepared solely for Macquarie, to assist the Directors in obtaining independent limited assurance over the Subject Matter Information for the purposes of reporting as part of the Report and the Dataset.



We accept no duty, responsibility or liability to anyone other than Macquarie in connection with this report or to Macquarie for the consequences of using or relying on it for a purpose other than that referred to above. We make no representation concerning the appropriateness of this report for anyone other than Macquarie and if anyone other than Macquarie chooses to use or rely on it they do so at their own risk.

This disclaimer applies to the maximum extent permitted by law and, without limitation, to liability arising in negligence or under statute and even if we consent to anyone other than Macquarie receiving or using this report.

*PricewaterhouseCoopers*  
PricewaterhouseCoopers

*C. Mara*

Caroline Mara  
Partner

Sydney  
3 May 2024