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Introduction

Macquarie Group Limited ("Macquarie or MGL") is pleased to present its Green Finance Impact Report for the twelve months to 31 March 2020.

This report relates to the MGL 2018 £2,100 million loan facility of which £500 million constitutes as green financing ("green tranches"). It provides information on the environmental benefits ("green impact") of the eligible projects¹ which have been notionally allocated² green tranche financing.

MGL is also pleased to note it has raised its second green financing transaction in March 2020, a US\$300 million Samurai loan facility in the Japanese market of which US\$150 million constitutes as green financing. This loan was not drawn at the 31 March reporting period and is not covered by this report.

The approach presented in this report is consistent with Macquarie's Green Finance Framework ("GFF") which was developed in accordance with the APLMA³ Green Loan Principles. Macquarie has utilised the expertise of its Green Investment Group ("GIG") Green Investment Ratings team to demonstrate the green impact of its eligible projects. The full Impact Report is available in Appendix 1.

Macquarie's GIG is a specialist in green infrastructure principal investment, project development and delivery, green impact advisory and the management of portfolio assets. Its track record, expertise and capability make it a global leader in green investment and development, dedicated to accelerating the transition to a greener global economy.



² See glossary for definition of notional allocation.



³ Asia Pacific Loan Market Association.

Key highlights



13 projects were allocated funding from the green tranches during the reporting period



The Green Finance Framework has been developed in accordance with the APLMA Green Loan Principles



£500m of green financingdrawn at March 31 from19 financiers across the globe



GIG Carbon Score: **3,461 AA**



The portfolio⁴ is forecast to avoid greenhouse gas emissions of 3,461kt CO₂e per year equivalent to taking over

1.1 million cars off the road⁵



Over **2,400 MW** of renewable energy capacity generated from the eligible projects allocated to, in development, construction and operation



The portfolio is forecast to produce over **8,000 GWh** per year enough to power over **1.9 million** households for a year⁶



Independent Assurance provided by PwC over Macquarie's compliance with the Green Finance Framework

⁴ The portfolio refers to the 13 eligible projects which were allocated green financing throughout the reporting period.

⁵ Year on year increase in 'cars off the road' is not due to change in portfolio but rather due to the updated conversion factor calculated using a petrol car based on data from UK Government Greenhouse gas reporting conversion factors. See www.gov.uk/government/collections/government-conversion-factors-for-company-reporting for further detail.

⁶ Calculated using the average household electricity data for the relevant country of the underlying projects available from the World Energy Council, and based on 2014 data (see https://www.worldenergy.org/data/).

Summary of green metrics

Throughout the reporting period 13 projects were allocated funding from the green tranches, delivering a significant green impact and achieving a Carbon Score of 3,461 AA.

Throughout this report the green impact and associated metrics:

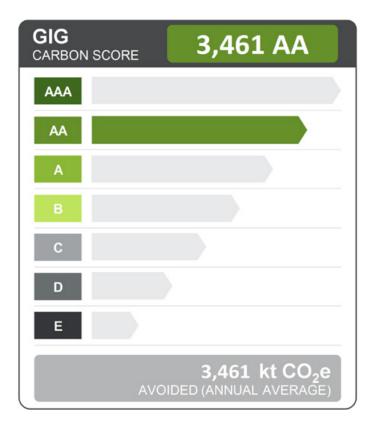
- 1. incorporate all the eligible projects which have been notionally allocated green tranche financing from 1 April 2019, to 31 March 2020 (the "portfolio"). This is in line with the Green Loan Principles and allows full transparency and disclosure of each project that has been supported by the green tranches.
- 2. reflect the total green impact derived from 100% of those projects that have been notionally allocated green tranche financing, and not just the proportional impact of the green tranches. This approach has been adopted, as the GFF's 'Management of proceeds' described on page 9 does not support proportional allocation due to the revolving allocation of the use of proceeds (i.e. as above, projects may not necessarily be supported by the facility for the entire reporting period).

GIG Carbon Score

The GIG Carbon Score is GIG's standard mark for communicating the impact of low carbon infrastructure in helping to reduce greenhouse gas emissions. While other measures of GHG emissions only consider the emissions produced during a project's operational phase, the GIG Carbon Score also considers the emissions across the project's entire lifecycle.

The rating shows the aggregated GIG Carbon Score for Macquarie's green tranches is 3,461 AA. The rating of AA reflects the low lifecycle carbon intensity of the wind and solar power projects notionally allocated funding (see page 7), and the mix of project locations in lower carbon intensive grids (e.g. UK and Sweden) and higher carbon grids (e.g. Taiwan and Poland). Projects located in countries with higher carbon intensive grids achieve higher ratings, reflective of the effectiveness of GHG emissions reduction.

The GIG Carbon Score also shows the quantified greenhouse gas emissions avoided (3,461 kt $\rm CO_2e/yr$), which indicates the portfolio lifecycle emissions avoided relative to the counterfactual (a scenario in which the projects were not built). This globally applicable approach allows investors to compare the relative performance of projects using an emissions avoided measure. Full details of the GIG Carbon Score methodology is provided within the Green Impact Report in Appendix 1.



⁷ For renewable energy projects, the GIG Carbon Score is a measure of a project's lifecycle GHG emissions compared to the emissions of energy taken from the local grid.

Portfolio renewable energy capacity



244 MW of renewable energy in development

The portfolio is forecast to produce over

8,000 GWh per year enough to power over 1.9 million households⁸ for a year

⁸ Calculated using the average household electricity data for the relevant country of the underlying projects available from the World Energy Council, and based on 2014 data (see https://www.worldenergy.org/data/)



1568 MW of renewable energy in

The portfolio is forecast to avoid greenhouse gas emissions of

3,461kt CO₂e per year equivalent to taking over 1.1 million cars off the road⁹



618 MW of renewable energy in

⁹ Year on year increase in 'cars off the road' is not due to change in portfolio but rather due to the updated conversion factor calculated using a petrol car based on data from UK Government Greenhouse gas reporting conversion factors. See www.gov.uk/government/collections/ government-conversion-factors-for-company-reporting) for further detail.



Macquarie's green financing transactions

Climate change and the associated legislative and regulatory responses present significant challenges for society and the global economy. Green financing has an important role to play in supporting the global energy transition, and investor appetite for these products is rising.

In June 2018, Macquarie issued a £2,100 million GBP loan facility of which £500 million constitutes green financing. The green tranches were issued in accordance with Macquarie's GFF. The GFF was established to demonstrate how Macquarie and its entities intend to enter into green financing transactions¹⁰ to fund projects that will deliver environmental benefits to support Macquarie's business strategy.

In March 2020, Macquarie issued its second green financing facility, a US\$300 million facility into the Japanese market. Of this, US\$150 million (Tranche A) constitutes as green financing and was issued in accordance with Macquarie's GFF. For the purposes of this report, the green impact of this facility is not discussed as the facility was drawn down after the 31 March 2020 reporting period end.

The details of Macquarie's green tranches are as below:

	Macquarie (Macquarie Samurai USD Facility	
Tranche	Tranche A1	Tranche B1	Tranche A
Issuer	Macquarie Group Limited	Macquarie Group Limited	Macquarie Group Limited
Issue Date	13 June 2018	13 June 2018	30 March 2020
Maturity Date	13 June 2021	13 June 2023	30 March 2025
Original Tenor	3 years	5 years	5 years
Total Volume	£250m	£250m	US\$150m
Structure	Revolver	Term	Term
Initial Drawdown Date	31 July 2019	26 July 2018	9 April 2020
Drawn Volume as at 31 March 2020	£250m	£250m	0
Use of Proceeds	In accordance with Macquarie's Green Finance Framework	In accordance with Macquarie's Green Finance Framework	In accordance with Macquarie's Green Finance Framework

¹⁰ See glossary for definition of green financing transactions.

For the reporting period April 2019 to March 2020:

- ¬ MGL GBP Facility Tranche A1 was drawn down on 31 July 2019 and allocated to from this date until the end of the reporting period.
- ¬ MGL GBP Facility Tranche B1 was drawn down and allocated to throughout the entire reporting period.
- ¬ MGL Samurai USD Facility Tranche A was undrawn and not allocated to during the reporting period.

The eligible projects which have been notionally allocated funding from the green tranches during the reporting period are summarised in the following table.

Eligible Projects	Location	Technology	Stage	Percentage of Macquarie Funding ¹¹	Total Capacity (MW)	Total GHG emissions avoided (kt CO ₂ e/yr) ¹⁴
BLE Malaysia	Malaysia	Solar	Construction	100%	3	2
Överturingen Wind Park	Sweden	Onshore Wind	Construction	100%12	235	41
East Anglia One	UK	Offshore Wind	Construction	16% ^{12,13}	714	980
Energy Pratham Godo Kaisya	Japan	Solar	Construction	100%	12	7
Eolica Kiselice	Poland	Onshore Wind	Operation	100%	42	73
Formosa 1	Taiwan	Offshore Wind	Operation	50% ¹²	128	207
Formosa 2	Taiwan	Offshore Wind	Construction	75% ¹²	376	625
Rampion Offshore Wind Farm	UK	Offshore Wind	Operation	25% ¹²	400	578
Lal Lal Wind Farm	Australia	Onshore Wind	Construction	20%	228	401
Lohas Ece Brown K.K (Tochigi)	Japan	Solar	Pre-Construction	100%	19	8
Lohas Ece Brown K.K (Nagano)	Japan	Solar	Pre-Construction	100%	16	10
Zajaczkowo Windfarm	Poland	Onshore Wind	Operation	100%	48	62
Murra Warra Wind Farm 2	Australia	Onshore Wind	Pre- Construction	50%	209	468
Total					2,430	3,461

¹¹ Reflects the share of the projects funded by Macquarie green financing at the time of allocation.

¹² The funding percentage was subject to variation during the reporting period. As at March 2020, funding to Överturingen Wind Park, East Anglia One, Formosa 1, Formosa 2 and Rampion Offshore Wind Farm was 50%, 13%, 25%, 26% and 0%, respectively.

 $^{^{\}rm 13}$ As at March 2020, Macquarie's interest in East Anglia One was 40%.

¹⁴ In an update to the 2019 Macquarie Green Finance Impact Report, projects that commence operations after July 2019 adopt an updated (v2.0) marginal grid electricity emission factor to calculate avoided GHG emissions, in line with International Financial Institutions IFI approach to GHG accounting for renewable energy projects. In most cases, this has the effect of reducing the estimate of avoided GHG emissions for projects previously evaluated with the v1.0 marginal grid emission factors.

Approach

The GFF under which the green tranches were issued was developed in accordance with the APLMA Green Loan Principles. It was supported by a second opinion external review by Sustainalytics and was noted to be credible and impactful.

The framework is based on four core components:

- 1. use of proceeds
- 2. process for project evaluation and selection
- 3. management of proceeds
- 4. reporting

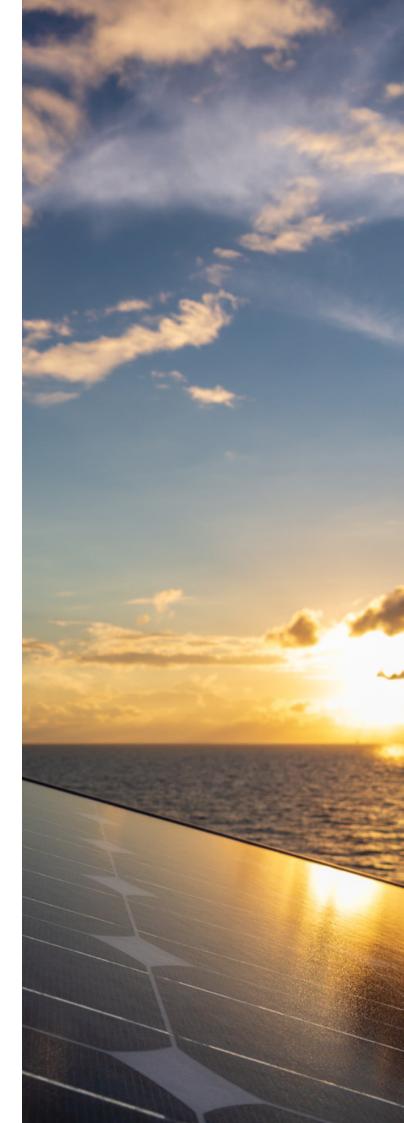
Use of proceeds

Under the GFF, the use of proceeds of each green financing transaction is notionally allocated against the financing or re-financing of eligible projects which provide clear environmental benefits.

The GFF explicitly recognises several broad categories of eligibility for projects with the objective of addressing key areas of environmental concern such as climate change, natural resources depletion, loss of biodiversity, and air, water and soil pollution.

The proceeds from the green tranches have so far been applied towards financing solar, offshore wind and onshore wind projects across the globe. Going forward, we may extend the use of loan proceeds to support further renewable energy, energy efficiency, waste management, green buildings and clean transportation projects.

Activities and lending to an industry or technology which directly involves fossil fuels, nuclear or biomass suitable for food production are specifically excluded under the GFF.



Process for project evaluation and selection

Macquarie has established a Green Finance Working Group ("GFWG") who have responsibility for governing and implementing the GFF. The GFWG currently comprises representatives from the Environmental and Social Risk ("ESR") team and the GIG Green Investment Ratings team who hold the in-house environmental expertise, as well as representatives from Risk Management Group - Credit, Financial Management Group - Group Treasury and Macquarie Capital.

Business units will identify potential eligible projects based on the criteria in the GFF's use of proceeds. Potential eligible projects are submitted to the GFWG for review and confirmation that they qualify under the GFF. This includes the preparation of a suitable Green Opinion¹⁵ provided by the GIG Green Investment Ratings team where appropriate.

The Green Investment Ratings team is responsible for confirming that the projects:

- fall within one of the eligible project categories defined in the GFF
- are anticipated to provide clear environmental sustainability and/or climate change mitigation benefits in terms of the contribution to one or more of GIG's Green Purposes¹⁶.

In addition to meeting the green loan eligibility criteria, all projects are assessed under Macquarie's group wide ESR policy and ESR assessment tool during the investment decision process. The ESR policy and tool provide a robust due diligence process and evaluate ESR issues including labour and employment practices, climate change, human rights, resource efficiency, pollution prevention, biodiversity and cultural heritage. The approach is based on international guidelines including the International Finance Corporation Performance Standards.

Management of proceeds

The proceeds of the green tranches have not been credited to a dedicated account and are rather deposited in Macquarie's general funding accounts.

We have developed an internal governance process to notionally allocate proceeds against eligible projects in an appropriate manner (as required in the Green Loan Principles). Through the GFWG, Macquarie maintains a register of green financing transactions and eligible projects and have implemented a monitoring and reporting process to ensure that:

- the total funding required¹⁷ for eligible projects is greater than the outstanding principal amounts due on green financing transactions
- eligible projects are owned within the consolidated entity¹⁸ which raises the green financing transaction that is notionally allocated against the eligible projects
- eligible projects do not have other financing (a) secured¹⁹ against them, or (b) attributable to them in respect of another 'use of proceeds' obligation.

Reporting

This report is designed to outline Macquarie's compliance with the GFF and contain information on the allocation reporting and impacts of outstanding green financing transactions.

The report is publicly available on Macquarie's website and will be revised annually.

Assurance

PwC has been engaged to provide independent assurance over Macquarie's compliance with the obligations contained within its GFF over the reporting period.

Claims relating to the green impact estimated in relation to the GFF were outside the scope of PwC's assurance engagement.

¹⁵ Green Opinion is an opinion provided by the Green Investment Ratings Team on the prospective transaction. It includes information on the anticipated environmental sustainability and/or climate change mitigation benefits of the projects to be financed by the transaction and will be a requirement for any transaction included in the eligible projects' portfolio.

¹⁶ As listed in GIG's Green Investment Principles, available from www.greeninvestmentgroup.com/green-impact.

¹⁷ This is calculated as the legal commitment Macquarie has agreed to invest in an eligible project as reflected in contractual arrangements entered into by Macquarie, irrespective of whether the commitment is drawn or undrawn. This includes, but is not necessarily limited to, the purchase price for an eligible project, the total committed exposure to an eligible project or an equity contribution to an eligible project.

¹⁸ Macquarie Group Limited and its subsidiaries.

¹⁹ Secured in this instance is defined as projects where external financing is either secured against Macquarie's investment (with no letter of credit in place) or has recourse back to Macquarie.

Green impact

As a specialist in green infrastructure, with expertise in green finance, investment and measurement, GIG has led the way in developing practical solutions to meet the growing demand for transparency and sustainability reporting from investors, shareholders, regulators, and communities.

GIG offers specialist Green Impact Advisory services on green finance investment instruments and green impact reporting for public disclosure to empower us and our partners to make more informed, sustainable choices whilst showcasing the green credentials of investments.

Macquarie has utilised the expertise of the GIG Green Investment Ratings team to demonstrate the green impact of the proceeds from the green tranches. In line with the Green Loan Principles, the green impact has been calculated for all the projects to which proceeds have been notionally allocated green tranche financing from 1 April 2019 to 31 March 2020. This allows full transparency and disclosure of each green project that has been supported by the GFF. The full Impact Report is available in Appendix 1.

Forecasted green impact of eligible projects²⁰

GHG emissions avoided (carbon dioxide equivalent)				
Average annual	3,461	kt CO ₂ e / yr		
Remaining lifetime	90,714	kt CO ₂ e		
Other emissions to air avoided (oxides of nitrogen)				
Average annual	5,138	t NO _x / yr		
Remaining lifetime	137,691	t NO _x		
Fossil fuels consumption avoided (oil equivalent)				
Average annual	1,543	kt oe / yr		
Remaining lifetime	40,460	kt oe		

²⁰ The forecasts are based on the total green impact derived from 100% of those projects that have been notionally allocated green tranche financing, and not just the proportional impact of the green tranches.

Green impact forecast accuracy

Green impact forecast accuracy is an assessment of the level of confidence that can reasonably be placed on the accuracy of any quantified green impact forecast. GIG have assessed the weighted average green impact forecast accuracy for the portfolio at Level 3 (Good). The forecasts and green impact forecast accuracy are subject to the methodology, assumptions, limitations and methods set out in Appendix 1.

The majority of the projects within the portfolio are in development (with some potential for design and capacity change), or in construction and as such actual performance is unknown.

This results in a Level 3 (Good) green impact forecast accuracy which will improve as more projects become operational and there is more confidence in the quantified green impact metrics.

2 3 4

Level 3 (Good)

The GIG Green Impact Report

The GIG Green Impact Report, which uses GIG's robust green impact methodology, provides best-practice green impact performance disclosure. The report has unique features developed using GIG's proprietary methodology and shows quantified, globally comparable green performance data for a project or portfolio including:

- greenhouse gas emissions avoided, calculated according to the internationally harmonised approach for greenhouse gas accounting²¹
- metrics for avoided fossil fuel consumption (tonnes of oil equivalent), air pollutant emissions (nitrous oxides, oxides of sulphur, particulate matter), and, where applicable, waste to landfill avoided and materials recycled and recovered
- a measure of accuracy of the forecast green impact, derived from project technology type, stage of project development, location of the project/country governance, and input data quality
- the performance against the UN Sustainable Development Goals ("SDGs") and their associated targets. Targets to which the portfolio (or project) directly contributes, and those Targets to which the portfolio or project indirectly contributes.

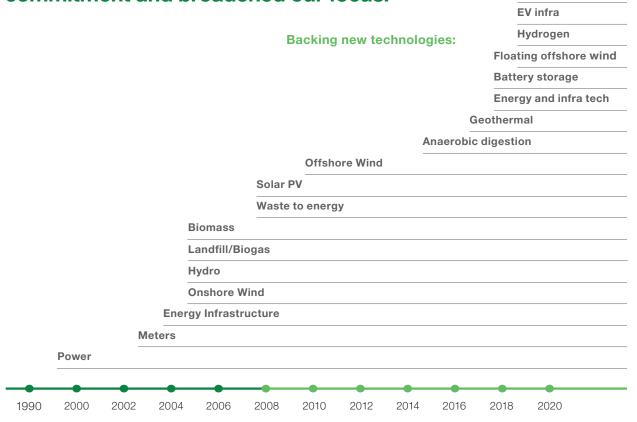
²¹ The GHG Protocol for Project Accounting - www.ghgprotocol.org/standards/project-protocol

Macquarie and green investment

Macquarie is a global financial services group operating in 31 markets in asset management, retail and business banking, wealth management, leasing and asset financing, market access, commodity trading, renewables development, investment banking and principal investment.

We have a substantial and longstanding commitment to the renewable energy sector, supporting the transition to a lower carbon economy by servicing clients across various renewable energy technologies including solar, wind, waste to energy, bioenergy, and energy efficiency.

We have consistently grown our commitment and broadened our focus:





Macquarie continues to support our clients seeking to manage and respond to sustainability challenges and capitalise on emerging opportunities. Drawing on our global network, sector expertise and strong record, Macquarie provides a diverse range of products and services with an ESG focus to corporate, government and institutional clients. Our activities span the investment cycle from research on alternative energy to tailored capital solutions for the development and construction of renewable assets.

Our capabilities

Finance and Develop

- ¬ investment in development projects, platforms and businesses
- debt and equity investment
- asset financing, including demand side management, energy efficient assets, distributed generation and battery storage and electric vehicles

Advise

- ¬ financial advisory
- debt and equity arrangement
- green financial institution advisory
- green impact assessment, reporting and ratings

Manage

- ¬ real asset management, including green infrastructure, equity and debt, asset finance and real estate
- ¬ securities investment management and structured access to funds
- equity-based products and alternative assets

Trade

- emission allowances and renewable energy certificates
- \neg inventory financing for environmental markets
- derivative financing for renewable energy projects
- ¬ environmental risk management solutions

Research

- ¬ specialist ESG and alternative energy research
- ¬ corporate and investor ESG engagement programmes

Onshore wind

The financial sector has a critical role to play, alongside government, businesses, investors and the community, to support the transition to a low-carbon and climate resilient economy. As a global financial services provider, we are committed to using our expertise in renewable energy and clean technology to connect global capital to opportunities that support this transition.



Offshore wind

GIG is a leading non-utility investor in offshore wind. In the UK – the world's leading offshore wind market – Macquarie and GIG have supported almost 50% of the country's total offshore wind capacity in operation or construction including the 714 MW East Anglia ONE development.²²

From the established offshore wind markets of Western Europe, the sector has now been growing into new and emerging markets across Asia where the growing need for power is creating real opportunity for low carbon investment.

Through its Formosa projects, GIG is at the forefront of Taiwan's burgeoning offshore wind market. Together with its joint venture partners Ørsted, JERA and Swancor, GIG successfully delivered Taiwan's first commercial scale offshore wind farm, Formosa I in late 2019. Along with joint venture partners JERA and Swancor Renewable, GIG has now also commenced construction on Formosa II. Together Formosa I and Formosa II are important milestones in the realisation of Taiwan's commitment to deliver 5.7 GW of offshore wind capacity by 2025, and will generate 504 MW of clean electricity, enough to power ~508,000 households. Formosa 3 is currently under development by GIG, and partners EnBW and JERA. The project intends to pursue capacity in Taiwan's next round of grid allocations later this year. Formosa 3 could deliver up to 2 GW of electricity, further advancing Taiwan's green energy ambitions. Formosa 3 was not allocated any green tranche financing in 2020 but may be considered for future allocations.

Glossary

CO ₂ e	Carbon dioxide equivalent; a unit of measurement used to compare emissions from various green-house gases relative to their global-warming potential.		
counterfactual	A scenario in which the eligible projects were not built.		
eligible projects	Eligible projects refer to projects which fall within the categories below and which are or have been originated by the various business units of Macquarie. ¬ renewable energy ¬ green buildings ¬ energy efficiency ¬ clean transportation ¬ waste management		
ESR	Environmental and Social Risk		
GFF	Macquarie's Green Finance Framework		
GFWG	Green Finance Working Group		
GHG	Greenhouse Gases		
GIG	Green Investment Group		
green finance transactions	These include bonds, loans and other debt or financing structures which support eligible projects, as defined in the GFF.		
green impact	Environmental benefits of the use of proceeds of the green tranches.		
green opinion	Opinion provided by the Green Investment Ratings team on the eligible project. It includes information on the anticipated environmental sustainability and/or climate change mitigation benefits of the project. A green opinion is a requirement for any project to be considered eligible in respect of the green tranches.		
green tranches	The tranches of the MGL GBP 2,100 million, and MGL USD 300m Samurai loan facilities which constitute as green financing. This includes tranches A1 and B1 of the MGL GBP Facility totalling GBP 500 million, and tranche A of the MGL Samurai Facility totalling USD 150 million.		
kt	Kilotonne, equal to 1000 metric tonnes.		
legal commitment	The dollar amount Macquarie has agreed to invest in an eligible project as reflected in contractual arrangements, irrespective of whether the commitment is drawn or undrawn. This includes, but is not necessarily limited to, the purchase price for an eligible project, the total committed exposure to an eligible project or an equity contribution to an eligible project.		
MW	Megawatt is a unit for measuring electrical power, equal to one million watts		
notional allocation	The allocation of outstanding green financing to eligible projects at any point during the reporting period (not just as at 31 March 2020) irrespective of whether the legal commitment of the eligible project is drawn. While notional allocations can be made against undrawn funding, we have been careful to allocate against drawn balances only in order to ensure the greatest green impact.		
PPAs	Power purchase agreements		
SDGs	United Nations Sustainable Development Goals		
reporting period	The period from April 2019 to March 2020		

Appendix 1

Macquarie GBP Loan Facility





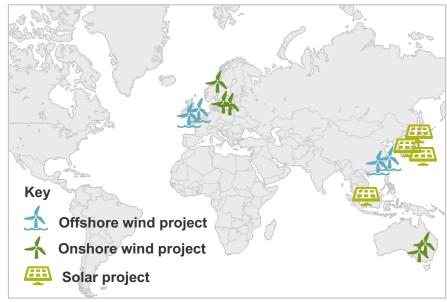
1. Introduction

The Green Impact Advisory ('GIA') team of Green Investment Group Limited ('GIG') has prepared this Green Impact Report (the 'Report') in connection with the Macquarie Group Limited ('MGL') GBP 2,100 million loan facility; of which GBP 500 million constitutes green financing ('green tranches'). This Report covers those projects (the 'Projects') that were supported by the green tranches between 1 April 2019 and 31 March 2020 (together, the 'Portfolio'). The GIA team has forecast the Portfolio's avoided: greenhouse gas ('GHG') emissions; emissions to air; and fossil fuels consumption (together, the 'Green Impact'), as summarised below. The forecasts are based on the total Green Impact derived from 100% of the Projects that have been notionally allocated green tranche financing. This Report also considers the Portfolio's alignment with the United Nations Sustainable Development Goals.

The Portfolio's GIG Carbon Score is 3,461 AA. We have assessed the weighted average Green Impact Forecast Accuracy for the Portfolio at Level 3 (Good). Please refer to Appendix 3 for further information on how this is calculated.

The Report is aligned with the reporting recommendations in Section 4 of the Green Loan Principles, May 2020.

Portfolio information ¹			
Operational projects	4		
Construction projects	6		
Consented projects in development	3		
Solar capacity (MW)	50		
Offshore wind capacity (MW)	1,618		
Onshore wind capacity (MW)	762		



GIG CARBON SCORE AAA AA B C D E 3,461 kt CO₂e AVOIDED (ANNUAL AVERAGE)

Green Impact: Forecast

GHG emissions avoided (carbon dioxide equivalent)				
Average annual	3,461	kt CO ₂ e / yr		
Remaining lifetime	90,714	kt CO ₂ e		
Other emissions to air avoided (oxides of nitrogen)				
Average annual	5,138	t NO _x / yr		
Remaining lifetime	137,691	t NO _x		
Fossil fuels consumption avoided (oil equivalent)				
Average annual	1,543	kt oe / yr		
Remaining lifetime	40,460	kt oe		

Important note: This Report has been prepared by GIG on the basis of, and should be read in conjunction with, the methodology assumptions, limitations and other terms set out in Appendices 2, 3 and the Important Notice and Disclaimer, Appendix 4. This is not a due diligence report and should not be relied upon as such. If appropriate, recipients and users of this Report should conduct their own separate environmental, social and governance enquiries and assessments. This Report is provided for information purposes only and does not constitute and shall not be deemed to be in any way an offer or invitation or solicitation of any offer or invitation to sell or purchase shares or invest in any Project. This Report has not been filled, lodged, registered or approved in any jurisdiction and recipients of this document should keep themselves informed of and comply with and observe all applicable legal and regulatory requirements.

¹ Please see Appendix 1 for further details of the projects within the Portfolio

Macquarie GBP Loan Facility



Green Investment Group

2. Green Impact Forecast

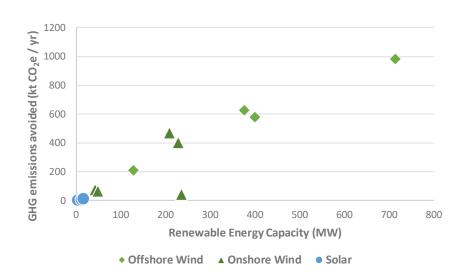
In this Report we use the term 'Green Impact' to refer to the GHG, emissions to air and fossil fuels consumption avoided by the Portfolio, as defined in Appendix 2. Forecasts are based on data provided to the GIA team and are subject to our assessment of Green Impact Forecast Accuracy (as set out on page 3). The forecasts and Green Impact Forecast Accuracy are subject to the methodology, assumptions, limitations and methods set out in the Appendices.

Greenhouse gas emissions avoided

The Portfolio is forecast to avoid emissions of over 3,400 kt CO₂e / yr

The Portfolio is forecast to avoid over 90,000 kilotonnes CO₂e over the remaining lifetime of the constituent projects.

Avoidance of GHG emissions (measured in carbon dioxide equivalent: CO₂e), both actual and forecast, is derived by comparing the emissions associated with each underlying project to a counterfactual (alternative method of energy generation). In this case, the counterfactual is local marginal electricity grid emissions of where the project is located.



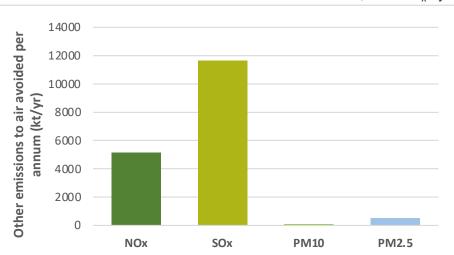
Greenhouse gas emissions avoided (carbon dioxide equivalent)			
Average annual 3,461 kt CO ₂ e / yr			
Remaining lifetime 90,714 kt CO ₂ e			

Other emissions to air avoided

The Portfolio is forecast to result in the avoidance of over 5,000 tonnes NO_x , nearly 12,000 tonnes SO_x and a total over 600 tonnes of particulate matter per year.

Other emissions to air avoided is a measure of net air pollutant emissions compared to the counterfactual method of energy generation. Quantified air pollutant emissions include oxides of nitrogen (NO_x) , oxides of sulphur (SO_x) , particulates up to 2.5 micrometres (μm) in diameter $(PM_{2.5})$ and particulates between 2.5 μm and 10 μm in diameter (PM_{10}) .

The Portfolio is forecast to avoid emissions of over 5,000 t NO_x / yr



Emissions to air avoided			
Average annual nitrogen oxides	5,138	t NO _x / yr	
Average annual sulphur oxides	11,657	t SO _x / yr	
Average annual 10µm particulate matter	111	t PM ₁₀ / yr	
Average annual 2.5µm particulate matter	511	t PM _{2.5} / yr	

Macquarie GBP Loan Facility



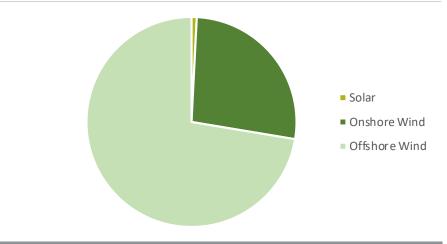
Green Investment Group

Fossil fuels consumption avoided

Fossil fuels consumption avoided is a measure of the net consumption of coal, oil and gas avoided, compared to the counterfactual method of grid-based electricity generation, and is normalised to metric kilotonnes of oil equivalent (kt oe).

The Portfolio is forecast to avoid an average of over 1,500 kt oe per year. When the underlying projects are aggregated based on technology, they are anticipated to avoid an average of 12 kt oe per year for solar projects, 1,117 kt oe per year for offshore wind and 414 kt oe per year for onshore wind.

The Portfolio is forecast to avoid over 1,500 kt oil equivalent annually



Fossil fuels consumption avoided	
Average annual	1,543 kt oe / yr
Remaining lifetime	40,460 kt oe

3. Green Impact Forecast Accuracy

Green Impact Forecast Accuracy is our assessment of the level of confidence that can reasonably be placed on the accuracy of any quantified Green Impact Forecast. It is based on information provided to the GIA team (set out in Appendix 1) and on the methodology referred to in Appendix 2.

We assess Green Impact Forecast Accuracy at levels ranging from Level 1 (Low) to Level 5 (Very High), which represent the combined and weighted average of a series of factors, according to our in-house experience of the sensitivity of each element. See Appendix 2 for further detail.

We have assessed the weighted average Green Impact Forecast Accuracy for the Portfolio at Level 3 (Good).

The majority of the projects within the Portfolio are in development (with some potential for design and capacity change), or in construction and as such actual performance is unknown. This results in a 'Good' Green Impact Forecast Accuracy, which will improve as more projects become operational.





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4. Contribution to the Sustainable Development Goals

The United Nations Sustainable Development Goals¹ (SDGs) are a set of 17 goals for sustainable development, defined by 169 SDG Targets to be achieved by 2030. The GIA team has considered the performance of the Portfolio against the SDGs and their associated Targets. The assessment has identified those Targets to which the underlying projects contribute directly (associated SDGs shown as full coloured icons below), and those Targets to which the projects contribute indirectly (inverted coloured SDG icons below).





















Goal





















Direct contribution

SDG Target

Target 3.9 Reduce deaths and illnesses from air pollution

Portfolio Contribution

According to the World Health Organization, air pollutants such as nitrogen oxides (NO_x), sulphur oxides (SO_x) and particulate matter (PM) can lead to premature death and illnesses such as stroke, heart disease, lung cancer and chronic respiratory diseases.2 Avoidance of fossil fuel electricity generation due to renewable generation of the Portfolio is forecast to avoid emissions of harmful air pollutants:

- 5,138 tonnes of NO_x / yr
- 11,657 tonnes of SO_x / yr
- 622 tonnes of particulate matter / yr



Target 7.2

Increase substantially the share of renewable energy in the global energy mix

> 2.4 GW of renewable energy generation capacity is supported by the Portfolio. Of this approximately 1.8 GW is in development or construction.



Target 9.1

Develop quality, reliable, sustainable and resilient infrastructure

http://sustainabledevelopment.un.org/sdgs

² World Health Organization, Ambient air pollution - a major threat to health and climate: https://www.who.int/airpollution/ambient/en/

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Indirect contribution

Goal

SDG Target

Portfolio Contribution

12 RESPONSIBLE CONSUMPTION



Target 12.2

Achieve the sustainable management and efficient use of natural resources

Avoidance of fossil fuel electricity generation due to renewable generation is forecast to avoid the consumption of 1,543 kilotonnes of oil equivalent annually.

13 CLIMATE ACTION



Target 13.3

Improve human and institutional capacity on climate change mitigation.

The Macquarie GBP Loan Facility in itself raises awareness and improves institutional capacity on climate change mitigation and negative impact reduction.

The Portfolio is forecast to avoid 3,461 kilotonnes CO₂e of greenhouse gas emissions annually



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Appendix 1

Portfolio: Key Project Data

Project name	Technology	Location	Capacity (MW)	Stage	Commencement of operations
East Anglia One Limited	Offshore Wind	United Kingdom	714	Construction	2020
Formosa 1	Offshore Wind	Taiwan	128	Operation	2020
Formosa 2	Offshore Wind	Taiwan	376	Construction	2021
Green Investment Rampion Ltd	Offshore Wind	United Kingdom	400	Operation	2018
Överturingen Wind Park	Onshore Wind	Sweden	235	Construction	2020
Eolica Kiselice	Onshore Wind	Poland	42	Operation	2008
Lal Lal Wind Farm	Onshore Wind	Australia	228	Construction	2020
Murra Warra Wind Farm 2	Onshore Wind	Australia	209	Pre-Construction	2021
Zajączkowo Windfarm	Onshore Wind	Poland	48	Operation	2008
BLE Malaysia 101	Solar	Malaysia	3	Construction	2020
Energy Pratham Godo Kaisya	Solar	Japan	12	Construction	2019
Lohas Ece Brown (Nagano)	Solar	Japan	16	Pre-Construction	2019
Lohas Ece Brown (Tochigi)	Solar	Japan	19	Pre-Construction	2020

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Appendix 2

Terms and Conditions: Terminology and Methodology

Terminology

Green Impact

The Green Impact metrics covered by this Report are identified in the header and executive summary. "Green Impact" is a term collective referring environmental benefits which have been calculated in accordance with GIG's methodology to be, or to be reasonably likely to be, delivered by the project(s) to which this Report refers. The collective term can include defined metrics such as tonnes carbon dioxide equivalent avoided (t CO2e), tonnes oil equivalent avoided (toe), and tonnes (t) of other air pollutant emissions avoided.

Green Impact Forecast Accuracy

"Green Impact Forecast Accuracy" is an expression of the level of confidence that. in the opinion of GIG, can reasonably be placed on the accuracy of any quantified Green Impact forecast. This assessment of forecast accuracy is described in levels as follows: Level 1 (Low), Level 2 (Moderate), Level 3 (Good), Level 4 (High), and Level 5 (Very High).

Methodology v 1.1

The Green Impact and Green Impact Forecast Accuracy assessments presented in this Report are based on GIG's approach to assessing Green Impact using the methodologies set out within its proprietary green investment principles, policies and the associated processes of the Green Investment Handbook¹. The Green Impact assessment has applied proprietary modelling techniques and comparative data developed and owned by GIG, or by third party owners and made available under licence to GIG.

Green Impact calculation

GIG's initial calculation of the Green Impact of each project is produced by comparing relevant information and data derived from that project against relevant counterfactual (or baseline) data for the assumed environmental impacts that would occur if the project did not take place, based on GIG's proprietary reference sources or provided to GIG by relevant third parties or

obtained from publicly available sources. The resultant estimated Green Impact is then subject to further qualitative evaluation before production of GIG's formal Green Impact Report.

For grid-connected projects that generate electricity, the counterfactual is assumed to be marginal electricity generated from the local electricity grid, which includes resources consumed to supply grid electricity. GIG's methodology calculates the net Green Impact of the project by comparing its likely emissions to those of a marginal grid electricity mix, using the methodology set out in the International Financial Institutions (IFI) approach to GHG accounting for renewable energy projects² and the IFI approach to GHG accounting for energy efficiency projects3.

GIG's methodology calculates results for likely Green Impact on an annual and lifetime basis. The Green Impact reported is 100% of the Green Impact of the There underlying project(s). proportionate allocation of Green Impact to any particular project investment or to particular investors, all of whom may report the same Green Impact from the underlying project(s).

Exclusions

The counterfactual of marginal grid electricity does not include the total quantifiable lifecycle environmental burdens (e.g. resources consumed during construction, or indirect emissions during operations such as those from associated transport vehicles) associated with energy generation. Therefore, to produce a valid comparison, the calculation of Green Impact for the project(s) assessed in this Report is based solely on the operational phase of the relevant project(s), and does not include a full lifecycle assessment of the project(s) unless specifically stated otherwise. This approach is aligned with Greenhouse Gas Project Protocol4.GIG's assessment does not include a review of any underlying project's environmental and/or social, permitting, licensing or other compliance status.

Green Impact Forecast Accuracy

Green Impact Forecast Accuracy is determined from a number of project parameters that include the project technology, stage of project development, and location of the project, together with GIG's opinion of the input data quality. These parameters have been assigned values that represent the degree to which they affect the accuracy of the forecast Green Impact, and are used to produce Forecast Accuracy scores for three elements: Data quality, Technology & development stage, and Local Forecast Accuracy governance5. The scores for the three elements are weighted according to GIG's in-house experience of the sensitivity of each element and combined to derive an overall level of Green Impact Forecast Accuracy

Carbon Score

Our Carbon Score shows the quantified emissions areenhouse gas combined with our Carbon Rating. The Carbon Rating is a measure of a project's lifecycle greenhouse gas emissions compared to the emissions of counterfactual. Projects with the lowest lifecycle emissions relative to counterfactual would score the highest ratings from AAA to B. Projects with lifecycle emissions similar to counterfactual would score a C, and projects with greater emissions would score a D or E. The emissions of the counterfactual are derived from the IFI approaches to greenhouse gas accounting please see above for details. Where we do not have project-specific information on lifecycle emissions, we use the median harmonised values from the US National Renewable Energy Laboratory's Lifecycle Assessment Harmonization⁶

¹ www.greeninvestmentbank.com/green-impact

² https://unfccc.int/sites/default/files/resource/Renewable%20Energy GHG%20accounting%20approach.pdf

³ https://unfccc.int/sites/default/files/resource/Energy%20Efficiency_GHG%20accounting%20approach.pdf

⁴ www.ghgprotocol.org/standards/project-protocol

⁵ Local governance scores are determined from datasets of indicators from the World Bank, Transparency International and United Nations University Institute for Environment and Human Security

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Appendix 3

Terms and Conditions: Assumptions, Limitations and other terms

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GIG calculates Green Impact using reference data obtained from, among others, by the Ecoinvent life cycle inventory datasets for the calculation of environmental impacts. Green Impact is also calculated based on data supplied by the International Energy Agency ("IEA"), specifically from the 2015 editions of the World Energy Statistics and Balances dataset and the CO2 Emissions from Fuel Combustion dataset.

Any limitations and caveats that are applicable to the Ecoinvent and IEA datasets, as published on their websites, are also applicable to the results presented in this Report.

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Appendix 4

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Appendix 2



Independent Reasonable Assurance Report to the Directors of Macquarie Group Limited over compliance with the Macquarie Green Finance Framework for the 12 months ended 31 March 2020

Opinion

We have undertaken a reasonable assurance engagement on Macquarie Group Limited's (**MGL**) compliance, in all material respects, with the obligations contained within the *Macquarie Green Finance Framework - June 2020* (**GFF**), for the 12 months ended 31 March 2020 (the **period**).

In our opinion, MGL has complied, in all material respects, with the obligations contained within the GFF for the period.

Basis for opinion

We conducted our engagement in accordance with Standard on Assurance Engagements ASAE 3100 *Compliance Engagements* issued by the Auditing and Assurance Standards Board.

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

MGL's responsibilities

MGL is responsible for:

- (a) Identification of the obligations contained within the GFF;
- (b) Ensuring that the GFF, as well as all eligible projects which have been notionally allocated green tranche financing, are aligned with the APLMA Green Loan Principles;
- (c) The compliance activity undertaken to meet the obligations contained within the GFF; and
- (d) Identification and implementation of controls which will mitigate those risks that prevent the obligations contained within the GFF being met and monitoring ongoing compliance.

Our independence and quality control

We have complied with the independence and other relevant ethical requirements relating to assurance engagements, and apply Auditing Standard ASQC 1 *Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, and Other Assurance Engagements* in undertaking this assurance engagement.

Our responsibility

Our responsibility is to express an opinion, on MGL's compliance, in all material respects, with the obligations contained within the GFF, for the period. ASAE 3100 requires that we plan and perform our procedures to obtain reasonable assurance about whether MGL has complied, in all material respects, with the obligations contained within the GFF, for the period.



An assurance engagement to report on MGL's compliance with the obligations contained within the GFF involves performing procedures to obtain evidence about the compliance activity and controls implemented to meet the obligations contained within the GFF. The procedures selected depend on our judgement, including the identification and assessment of risks of material non-compliance with the obligations contained within the GFF.

Inherent limitations

Because of the inherent limitations of an assurance engagement, together with the internal control structure, it is possible that fraud, error or non-compliance with compliance requirements may occur and not be detected.

A reasonable assurance engagement for the period does not provide assurance on whether compliance with the obligations contained within the GFF will continue in the future.

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John Tomac

PricewaterhouseCoopers

Primater house Coopers

John Tomac Partner Sydney 13 July 2020

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