Macquarie Green Investment Group

Introduction

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Introduction to Macquarie Group

At a Glance

Global financial group

Headquartered and listed in Australia
Top 10 Australian company

$A496.7 billion assets under management

Top 50 global asset manager [1]

A-/A3/BBB credit rating

Stable and diverse funding base [2]

$A4.2 billion Group capital surplus

Basel III compliant [3]

Macquarie Group achieved net profit and robust growth

49 years of unbroken profitability

1. As at 31 March 2018. 2. These ratings are assigned to Macquarie Group Limited by Fitch, Moody's and Standard & Poor's respectively 3. Calculated at 8.5% RWA including the capital conservation buffer (CCB), per APRA ADI Prudential Standard 110. The APRA Basel III Group capital surplus is $A5.6b calculated at 7% RWA, per the internal minimum Tier 1 ratio of the Bank Group.

Principal Investments: Macquarie Capital

Invested ~$A2.6 billion of principal capital in green energy globally since 2011, and now manage over 6GW of renewable energy assets

Leaders in our field

Macquarie Capital is a pioneer and market leader in the energy and infrastructure sectors and has been for over two decades. We specialise in **advisory services, partnership capital and development funding**

Power and renewables

Renewable power
Conventional power
Transmission assets

Energy logistics

Oil and gas storage
Mid-stream gas (LNG)
Hedged reserves
Pipes

Transport and social

Roads
Bridges
Schools
Hospitals
Courts
Prison

Advisory and capital

Sector focused financial adviser

Our advisory capability spans:

- project advisory
- equity capital markets
- debt capital markets
- merger and acquisition

$A 2.6b

of principal capital invested in green energy since 2011

Experienced capital partner

- Macquarie has a long track record of supporting our clients and partners by offering tailored capital solutions for the development and construction of energy and infrastructure projects, by mobilising our large and flexible balance sheet.
- We provide funding support to our partners.

Development funding:
for the development of new projects pre-construction

Construction funding:
for the construction and delivery of projects

Aggregation funding:
for the accumulation of asset portfolios

We add unique value to our clients in the following areas:

01 Independent third party advice

02 Deep sector knowledge and hands-on execution

03 Flexible balance sheet delivering facilitation capital

04 Experience raising long-term institutional capital

05 Partnership with industrials and developers

History of the Green Investment Group ("GIG")

GIB inception

- Green Investment Bank ("GIB") was created by the UK Government in October 2012 to invest capital in the UK green infrastructure sector
- Clear mandate designed to invest up to £3.8bn of capital
- Built the industry's leading team of >80 investment professionals
- Privatised by the UK Government in 2017, via full sale to Macquarie

GIB track record

- Track record of c.100 investments (direct and indirect), committing £3.4bn of capital
- Resulting portfolio of high-quality assets
- Diversified its business model with third party capital management
- Commercialised a fully integrated "green" reporting approach, similar to a financial performance review
- Developed a brand that is recognised globally and has established a unique position in the marketplace

GIB key events

2012

October 2012 GIB officially launches

December 2012 GIB makes its first investment

2013

October 2013 GIB organises inaugural global Green Bank Congress

November 2013 Publication of GIB's green investment principles

2014

March 2014 GIB reaches £1bn total commitments

May 2014 State Aid clearance to expand mandate to Onshore Renewables

2015

April 2015 First close of the world's first Offshore Wind Fund

March 2015 GIB establishes UK Climate Investments JV with UK Government

June 2015 UK Government announces intention to raise private capital for GIB

2016

March 2016 Launch of formal privatisation process

June 2016 Record financial results with c.£10m of net profit in FY16

2017

April 2017 Announcement of formal agreement with Macquarie Group led consortium

February 2017 Final close of Offshore Wind Fund with £1.1bn under management

August 2017 Closing of privatisation transaction and branding to Green Investment Group

Acquisition of GIG

The acquisition of the Green Investment Bank – now GIG – represents a major milestone. Collectively, Macquarie and the GIG have led investments worth over £15 billion in UK green energy

Selected investments in new low carbon infrastructure projects since 2010

ENERGY EFFICIENCY
Barking & Dagenham street lighting[1]
Macquarie Energy Leasing[2]
Glasgow City Council street lighting[1]
Salford NHS Trust[1]
Tayside NHS Trust[1]
Wick District Heating[1]

OFFSHORE WIND
Galloper[12]
Gwynt y Môr[1]
Lincs[1]
Race Bank[2]
Rampion[1]
Westermost Rough[1]

ONSHORE RENEWABLES
Banks Renewables wind farm[2]
Blackcraig wind farm[1]
Liatre Burn hydro[1]
NextEnergy Solar[2]
River Arkaig hydro[1]
Sròndoire wind farm[1]

TIDAL
Atlantis Resources[2]
Swansea Lagoon[2]

WASTE & BIOENERGY
Cramlington CHP[1]
Full Circle Generation[1]
Kemsley[1]
MGT Teesside Biomass[2]
Speyside CHP[1]
Tilbury Green Power[1]

Together, Macquarie and Green Investment Bank have invested in:

60% of offshore wind capacity in the UK

>30 bioenergy and waste projects

1.8GW solar projects financed

2m smart meters installed

850MW tidal projects under development

Map illustrative of project locations which have received investment from or arranged by Macquarie and/or GIB since 2010
1. Green investment Bank 2. Macquarie Group Limited

Strong Global Track Record

Macquarie and GIG have a collective global track record in renewable energy investments that has been accumulated over more than a decade

Renewables Energy	Capacity
Offshore Wind	
Cons. + Ops.	4,419 MW
In development	1,900 MW
Onshore Wind	2,054 MW
Solar PV	1,421 MW
Biomass / WTE / LFG	828 MW
Hydro	1,257 MW
Total	**11,879 MW**

Note: Renewable energy assets owned by Macquarie, Macquarie managed funds or Macquarie advised investors as of 31 March 2018. Total gross capacities of assets shown

Pioneering Green Investment

GIG brings principal investment capability, experience and reach to a dynamic and expanding global market in green energy and infrastructure

Costs of green energy technologies are falling rapidly

…becoming competitive with traditional technologies and systems

Unlocking a global cycle of change

…underpinned by far-reaching international agreements

Increasingly dominating the outlook for energy infrastructure

…as deployment of renewables accelerates and overtakes conventionals

Reshaping energy markets and business models

… in different ways, at a different pace, in different places

Opening new frontiers of opportunity and driving innovation

…becoming one of the largest opportunities in global infrastructure investment

Where experience and capability are key to successful investment

…built on a global track record encompassing diverse technologies, situations and markets

Technical Capability and Resources

GIG is capable of driving significant value through deep technical know-how and asset optimisation expertise

GIG

- GIG will bring knowledge to pipeline investments
- The team is capable of **informing and supporting our development partners in decision-making** in relation to multi-faceted and highly specialised technical and commercial issues
- **A team of 25 individuals** in Europe with experience across a wide range of different technologies and disciplines

A team of dedicated experts

… invested in over **£10bn** of major infrastructure and renewables projects

… delivered **22** major infrastructure projects as EPC contractor

… acted as technical advisor and owner's engineer to over **200** projects

… Performance monitoring and green reporting across a portfolio of **20+** assets

Professionals with diverse technical backgrounds

DONG energy
innogy
IBERDROLA
sse
sgurr energy
Sustainable Engineering Worldwide
DNV·GL
Lend Lease
Exxon
CONCORD ENERGY HOLDINGS LLC
miller
GLOBAL RENEWABLES™

Offshore Wind Expertise

Macquarie and GIG have established a credible track record of global investment, supporting leading developers in realising successful projects across diverse geographies and support regimes

Our response to market dynamics

The European offshore wind sector, once a frontier market, has become an established asset class characterised by a rapid increase in cumulative capacity, asset size and commercial milestones

With a proven record of cost reduction in the NW European market, the potential for offshore wind to become a globally significant low carbon power technology is increasingly recognised - driving a new phase of international growth and technological development

We will continue to support the global expansion of the sector, drawing upon our deep technical and sectoral expertise to open new international opportunities and to bring investment into projects employing the next generation of turbines, foundations and transmission infrastructure

Macquarie and GIG offshore wind experience[1]

(1) Includes investment and advisory roles by the Green Investment Group, Macquarie Group and Macquarie managed funds

Key Offshore Wind Transactions

Building on our European track record, Macquarie and GIG are supporting the global expansion of offshore wind, pioneering innovative financing approaches and assuming greater development risk

Formosa 3, Taiwan

Developing one of Taiwan's largest offshore projects

- Up to 1,900 MW capacity - which if all connected to grid would represent 20% of the total Taiwanese offshore wind capacity
- Macquarie, in partnership with Swancor Renewable, is currently undertaking early-stage development works on the Formosa 3 site

Lynn & Inner Dowsing, UK

UK's 1st wind farm with no utility owners

- Acquisition of a 61% stake in the 194 MW Lynn & Inner Dowsing wind farm by the UK Green Investment Bank Offshore Wind Fund
- This asset became the first UK offshore wind farm without a utility ownership interest, with O&M contracts being awarded to Siemens

Baltic 2, Germany

Germany's market-first holdco financed asset

- Acquisition of a 49.9% stake in Baltic 2, funded with Germany's first offshore wind HoldCo financing
- EnBW's objective to consolidate the project's earnings without taking on any liabilities meant that debt financing had to be raised at the holding company level, a structure that had not been implemented previously in Germany

Galloper, UK

UK's 1st construction ready offshore wind project financing

- The Galloper offshore wind farm is a 353 MW wind farm located in the North Sea, 27km off the coast of Suffolk
- Macquarie and GIB invested alongside Innogy and Siemens Financial Services as four equal 25% equity investors
- Our strong technical expertise allowed us to evaluate and contribute to finalising of a construction strategy that delivers an optimal balance between cost savings and structural robustness

Bringing GIG to Asia

Macquarie Capital introduced GIG in Korea in May 2018, bringing together the world's first 'green bank' with the world's largest infrastructure investor to support renewables expansion in Asia

MACQUARIE

Green Investment Group

"We will continue to be a leading investor in the UK while using the Macquarie platform to expand the Green Investment Group business internationally."

Edward Northam Senior Managing Director, Green Investment Group

About us

Through Green Investment Group and our global network of offices, Macquarie Capital provides:

- A dedicated principal investment platform for green infrastructure with a combined team of over 170 green energy and investment specialists
- A deep pool of commercial, technical and operational expertise, drawing on experience from a truly global business
- The scope to apply this capability on a global scale, providing the basis for strategic international relationships

Our difference

In a growing and dynamic market we continue to evolve our offer, taking on new risks to support our partners in opening up new frontiers and opportunities:

- Engaging in opportunities across the project lifecycle – from development, to construction and operations
- Becoming increasingly active in the development stage of projects, pioneering a position as financial investor and project sponsor
- Increasing our exposure to emerging technologies and infrastructure
- Extending further into major growth markets, including Asia
- Encompassing the breadth of the energy value chain

Development Capital in Korea

MACQUARIE

KEY PRINCIPLES

Technology and innovation

Sustainability

International standard WHSE

Strong alignment to public interest and policy

RE-CLEAN Holdings

Environmental services including

- Food waste treatment
- Organic waste treatment
- Combustible waste treatment
- Clean energy

GIH
GREEN INNOVATION HOLDINGS

Renewable energy development

- Solar power
- Wind power
- Energy storage
- Smart grid and energy solutions

Working to a Greener Future

Macquarie Capital with GIG, ReClean Holdings and GIH can bring a wealth of experience and insights on the renewable market to the Korean Government, especially in offshore wind sector

Green Investment Group

RE-CLEAN Holdings

GIH GREEN INNOVATION HOLDINGS

Together, we are specialists in green energy investment, project development & delivery, portfolio management and related services

Our track record, expertise and capability make us a global leader and responsible corporate citizens, dedicated to supporting the growth of the global green economy

We are excited to engage with the Ministries and the community on Korean renewables, especially offshore wind sector