



# 2019

## Green Bond Impact Report<sup>1</sup> Industrial Bank Co., Ltd.

兴业银行  
INDUSTRIAL BANK CO.,LTD.



Green Bond Impact Report 2019<sup>1</sup>



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We welcome your feedback and views on this report.  
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#### Acknowledgements

The report was prepared by the Green Bond Working Group in Industrial Bank's Green Finance Department and reviewed by its senior management.  
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## Introduction: About IB

Industrial Bank Co., Ltd. (hereinafter referred to as Industrial Bank or IB) was established in Fuzhou City, Fujian Province in 1988 with a registered capital of 20.774 billion yuan and listed on the Shanghai Stock Exchange in 2007 (stock code: 601166). It's one of the first joint-stock commercial banks approved by the State Council and the People's Bank of China. Now it has grown into a mainstream commercial banking group with banking as its main business and multiple fields such as trust, financial lease, funds, futures, asset management, consumer finance, research and consulting, and digital finance covered, ranking among the top 30 banks in the world and Fortune Global 500.

### Banking as Its Main Business



Trust



Financial Lease



Funds



Futures



Asset Management



Consumer Finance



Research and Consulting



Digital Finance Covered



## Green Finance Practice of IB

China has achieved rapid economic growth since the economic reforms, especially following China's accession to the World Trade Organization in 2001. However, this rapid economic growth has also resulted in a tremendous demand for energy and natural resources, and has given rise to severe environmental concerns. As the world's largest energy consumer and GHG emitter, China is fully aware of the potential impacts of pollutions and climate change and is committed to addressing this global issue. In 2016, seven Chinese ministerial agencies issued the Guidelines for Establishing the Green Financial System, marking the country's effort to solve environmental and climate issues with financial tools.

As for IB, its effort to explore new path of combining commercial banking with environmental judgements started even earlier. IB was the first commercial bank in China to fully embrace sustainable development and Green finance. In 2007, the Bank signed the "UNEP Statement by Financial Institutions on the Environment & Sustainable Development". The Bank announced the adoption of the Equator Principles in 2008, becoming the first bank in China that integrated an advanced international environmental and social risk management framework into its daily business. In China, as the Vice Secretary-General of the Green Finance Committee (GFC) established under China Financial Forum, the Bank has been proactively promoting Green finance as part of the national agenda, contributing to the drafting of several key policies.

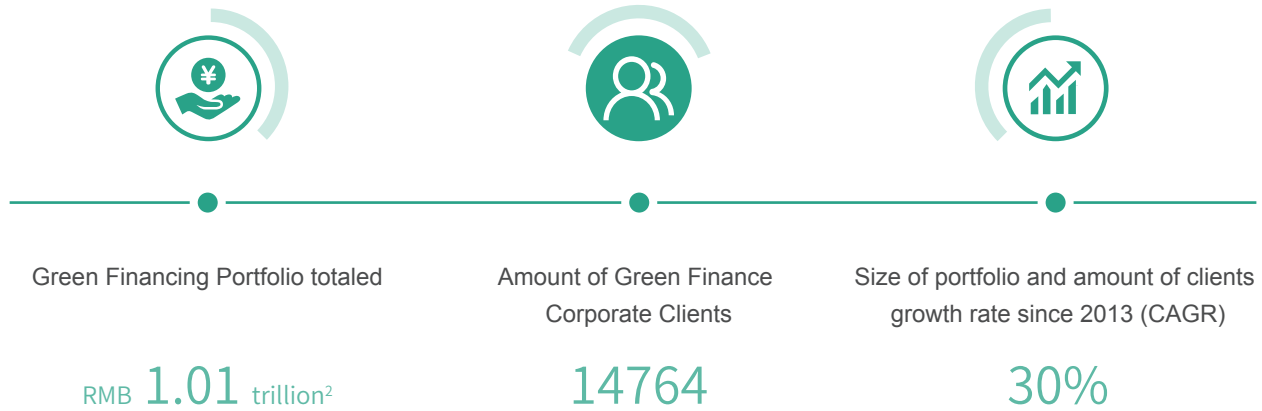
In order to serve the different financing demands of its clients in environment friendly area, IB has innovatively mobilized its branches and subsidiaries to provide not only traditional loan financing, but also other types of financial tools, including debt underwriting, equity investment, financing leasing and securitization.

To ensure a robust and balanced development in green finance, IB has also established a well-functioning organization. At the senior management level, the President of the Bank heads three steering committees in sustainable development, green finance and equator principles. At the headquarters level, the Green Finance Department, originally set up in 2009 as the Sustainable Finance Center, is the leading coordinator, implementer and promotor for the Bank and all its subsidiaries. Currently the Green Finance Department consists of six professional teams, responsible respectively for industry research, product innovation, marketing, environmental and social risk management and brand building. At the branch level, there are around 40 professional green finance business teams in tier 1 branch offices covering the whole country, with approximately 200 green finance specialists in total. Also, relevant KPIs for green financial business development have been incorporated into the comprehensive annual performance evaluation to encourage branches and subsidiaries to explore more green finance opportunities. Reserved business resources and preferential policies are arranged on an annual basis to promote green finance, including specified credit scale, risk assets, bond funds and differentiated authorization policies, etc.





Being a first mover and a one-stop financial service provider in green finance, IB's effort obtains significant return. In 2019, IB's Green Financing Portfolio totaled RMB**1.01** trillion<sup>2</sup> and IB had **14764** Green Finance Corporate Clients. Both figures have been growing at over **30%** CAGR since 2013.




Green Financing Portfolio and Amount of Corporate Clients




<sup>2</sup> Including loans, debt investment, bond investment, financing leasing, managed class assets, and equity investment that aligned with IB's green financing standards (the "IB green finance standards"). IB green finance standards is a series of self-developed standards which are drafted based on domestic and international green finance standards and industrial standards.



IB's Green Financing Portfolio in 2019 is expected to realize the following environmental impacts per year:



**Ice Reduction:**  
**30.04** million tons



**CO<sub>2</sub> Emission Reduction:**  
**84.39** million tons

**COD**

**COD Emission Reduction:**  
**4.07** million tons

**NH<sub>3</sub>-n**

**NH<sub>3</sub>-n Emission Reduction:**  
**191.1** thousand tons



**SO<sub>2</sub>**

**SO<sub>2</sub> Emission Reduction:**  
**947.2** thousand tons

**NO<sub>2</sub>**

**NO<sub>x</sub> Emission Reduction:**  
**92.6** thousand tons



**Solid Waste Recycling:**  
**45.67** million tons



**Water Saving:**  
**410.06** million tons



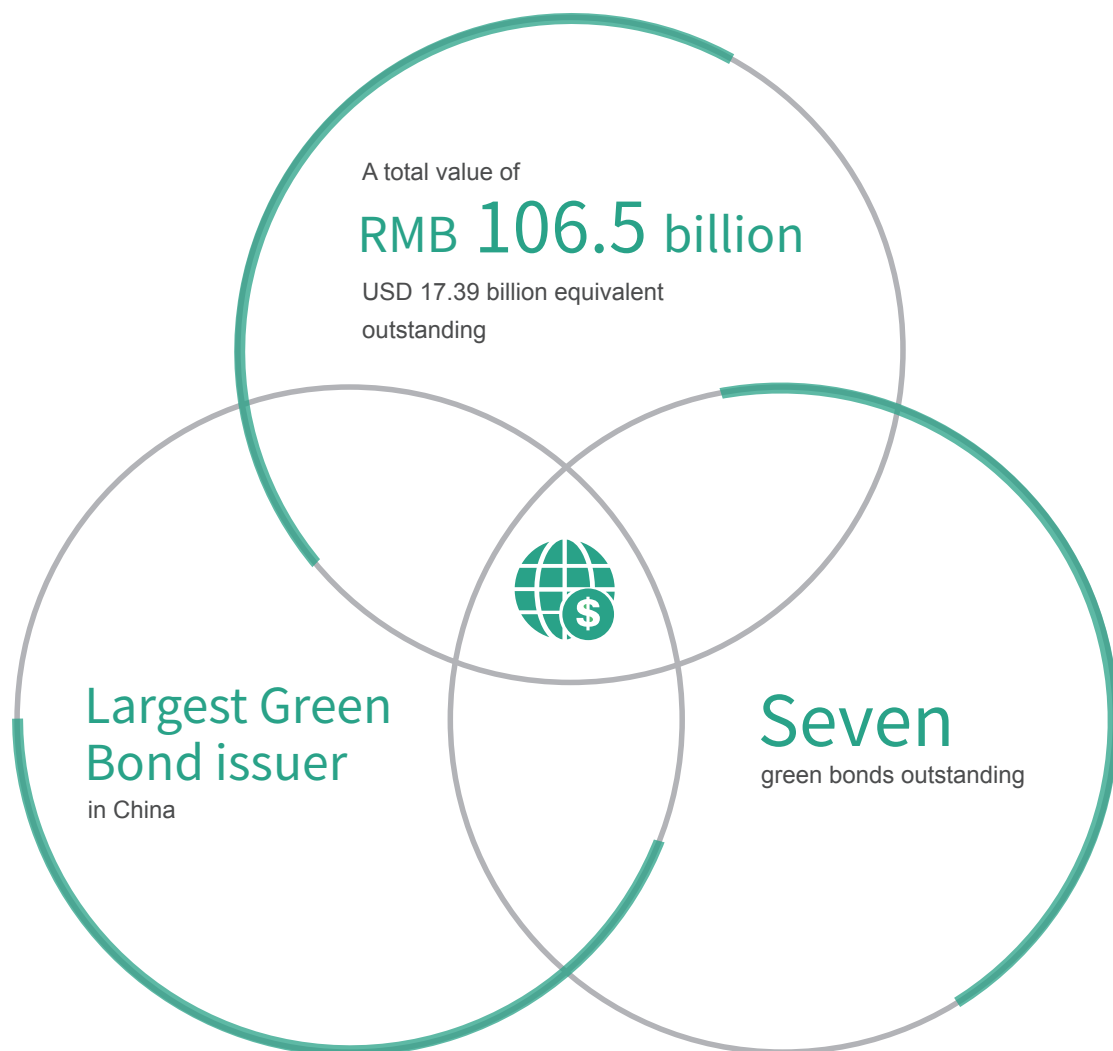


## Green Bonds Issuance

IB treats green bonds as a further elaboration of the Bank's sustainable development strategy. They serve the purposes of providing long-term, stable fund for IB to finance its green projects as well as delivering the bank's consistent effort in Green Finance to its investors and support them to meet their goals in the expanding green economy.

IB issued the first Green finance bond in China in 2016. By the end of 2019, IB has issued 9 green bonds (RMB 136.5 billion) in total. Seven of which are outstanding, including RMB 100 billion listed domestically, USD 600 million listed in Hong Kong and EUR 300 million in Luxembourg.

Funds are raised to finance projects in environmental protection, energy efficiency, renewable energy, clean energy, resource conserving and recycling, clean transportation, ecological protection, climate change response and other industries that are included in Chinese domestic and international green bond standards.





## Green Bond Issued under the *Green Bond Framework for IB*

In 2018, IB announced *Green Bond Framework for Industrial Bank Co., Ltd.* (the “Framework”), which defines the use of proceeds, project evaluation and selection process, management of proceeds and reporting of IB’s offshore green bonds.<sup>3</sup> As of Dec 31<sup>st</sup> 2019, one offshore green bond issued under the framework remains outstanding, which include two tranches with a total value of over USD 900 million.

Issue Type	Senior Unsecure Bond	
Issue Format	MTN Reg S	
Issue Rating	Baa2 (Moody's)	
ISIN	XS1898122301	XS1898123374
Issue Date	2018/11/20	2018/11/20
Maturity Date	2021/11/20	2021/11/20
Issue	USD 3Y FRN	EUR 3Y FRN
Size	USD \$600,000,000.00	EUR €300,000,000.00
Issue Price	100	100
Benchmark	3-Month USD LIBOR	3-Month EUR EURIBOR
Coupon Rate	3M-LIBOR + 85bps	3M-EURIBOR + 85bps
Listing Venue	Hong Kong Stock Exchange	Luxembourg Stock Exchange
Use of Proceeds	To finance and refinance, in whole or in part, eligible Green assets as defined in the Framework	
Allocated Proceeds (USD)	943.93	
Unallocated Proceeds (USD)	943.93	
% of proceeds allocated	100.00%	

<sup>3</sup> IB's RMB 130 billion domestically issued green financial bonds, which are traded on China Inter-Bank Bond Market, are not issued under the framework but are subjected to green bonds regulatory requirements proposed by Chinese domestic financial regulators, including People's Bank of China (PBoC, 中国人民银行) and China Banking and Insurance Regulatory Commission (CBIRC, 中国银行保险监督管理委员会). Corresponding green bond reports are posted on [www.chinabond.com.cn](http://www.chinabond.com.cn) as of regulatory requirements.





# Impact Report Highlights

## Renewable Energy Projects

**2** projects in progress



**88.40** MW  
renewable capacity from wind power generators



**200.92** GWh  
annual renewable energy generated



**20,520.83** tons  
of burned standard coal equivalent avoided



**58,896.9** tons  
of CO<sub>2</sub> emission equivalent avoided per year

**SO<sub>2</sub>**  
**14.16** tons  
of SO<sub>2</sub> emission equivalent avoided per year

**NO<sub>2</sub>**  
**18.40** tons  
of NO<sub>x</sub> emission equivalent avoided per year



**13,600** tons  
of lime ash avoided per year

## Low Carbon and Low Emission Transportation

**3** projects in progress



**89.38** KM  
of track built



**1,345.64** million  
Passengers to be transported per year by 2045



**43,817.43** tons  
of CO<sub>2</sub> emission equivalent avoided per year



## Allocation of Proceeds

RMB 6550.23 million (USD 943.93 million), which accounts for 100.00% of the total fund raised by the Green Bonds, had been allocated to two Renewable Energy and three Low Carbon and Low Emission Transportation projects by Dec 31<sup>st</sup>, 2019.

### Allocation of Proceeds by Sector

Low Carbon and Low Emission Transportation  
96%

Renewable Energy  
4%

### Allocation of Proceeds by Sector and Region

Ref. No	Type	Category	Location	Committed Amount (RMB million)	Allocated Amount (RMB million)	Allocated Amount (USD million eq., \$/¥ =0.1441)
Project 1	Renewable Energy	Onshore Wind Power	Gutian, Fujian, China	260.00	89.75	12.93
Project 2			Quanzhou, Fujian, China	353.00	164.61	23.72
			Subtotal	613.00	254.36	36.65
Project 3	Low Carbon and Low Emission Transportation	Metro	Zhengzhou, Henan, China	2,000.00	750.00	108.08
Project 4			Guangzhou, Guangdong, China	3,000.00	420.00	60.52
Project 5			Xiamen, Fujian, China	18,000.00	5,125.87	738.67
			Subtotal	23,000.00	6,295.87	907.28
			Total Allocation	23,613.00	6,550.23	943.93
			Unallocated Proceeds		-	-
			Total		6,550.23	943.93



# Eligible Projects Summary

## Renewable Energy

Quantity Relations	(a)	(b)	(c)	(d)	(e)	(f)	(g)=(f)*0.1441	(h)=(f)/(d)	(i)	(j)	(k)	(l)=(k)*(h)	(m)	(n)=(m)*(h)	(o)	(p)=(o)*(h)	(q)	(r)=(q)*(h)	(s)
	Project Information			Proceeds Allocation					Impact Factors										
Ref. No & Reported level	Category	Location	Project Description	Total investment (RMB million)	Committed Amount (RMB million)	Allocated Amount (RMB million)	Allocated Amount (USD million eq.)	IB current share	Generator Capacity (MW)	Annual Power Output (GWh)	Tce avoided (tons/yr)		CO2 Emission Eq. avoided (tons/yr)		SO2 Emission Eq. avoided (ton/yr)		NOx Emission Eq. avoided (tons/yr)		Other Impacts
/	/	/	/	/	/	/	/	/	Project level	Project level	Project level	IB share	Project level	IB share	Project level	IB share	Project level	IB share	Project level
Project 1	Onshore Wind Power	Gutian, Fujian, China	This onshore wind power project locates in south-eastern China with a site area about 5.0km². The project plans to install 20 sets of 2.0MW wind power generator sets with a construction scale of 40MW. The annual power output is 84.69 GWh with 2059.09 GEAH when running at full capacity.	338.26	260.00	89.75	12.93	26.53%	40.00	84.69	26,200.00	6,951.61	76,400.00	20,271.09	10.09	2.68	14.41	3.82	/
Project 2	Onshore Wind Power	Quanzhou, Fujian, China	This onshore wind power project locates in south-eastern China. The project plans to install 24 sets of 2.0MW wind power generator sets and one 110kV booster station. The annual power output is 116.23 GWh with 2333.54 GEAH when running at full capacity.	442.79	353.00	164.61	23.72	37.18%	48.40	116.23	36,500.00	13,569.22	103,900.00	38,625.81	30.90	11.49	39.20	14.57	lime ash avoided 13,600 tons
Total	/	/	/	781.05	613.00	254.36	36.65	/	88.40	200.92	62,700.00	20,520.83	180,300.00	58,896.90	40.99	14.16	53.61	18.40	/

## Low Carbon and Low Emission Transportation

Quantitative Relationships	(a)	(b)	(c)	(d)	(e)	(f)	(g)=(f)*0.1441	(h)=(f)/(d)	(i)	(j)	(k)	(l)	(m)=(l)*(h)	(n)	(o)=(n)*(h)
	Project Information			Proceeds Allocation					Impact Factors						
Ref. No & Reported level	Category	Location	Project Description	Total investment (RMB million)	Committed Amount (RMB million)	Allocated Amount (RMB million)	Allocated Amount (USD million eq.)	IB current share	Length of track (km)	Passenger Transported by 2020 (million/yr)	Passenger Transported by 2045 (million/yr)	CO2 Emission Eq. avoided by 2020 (tons/yr)		CO2 Emission Eq. avoided by 2045 (tons/yr)	
/	/	/	/	/	/	/	/	/	Project level	Project level	Project level	Project level	IB share	Project level	IB share
Project 1	Metro	Zhengzhou, Henan, China	This electrified urban metro project locates in one of the major city in central China. The project is 9.461 km in length and contains 6 underground stations. The cost of the construction of stations is not covered by this green bond offering. The project is designed to meet the growing needs of urban transportation and reduce local people's reliance on other carbon-intensive transportations.	5,836.44	2,000.00	750.00	108.08	12.85%	9.46	53.15	117.78	5,130.36	659.27	47,741.82	6,134.97
Project 2	Metro	Guangzhou, Guangdong, China	This electrified urban metro project locates in one of the major coastal city in south-eastern China. The project is 43.2 km in length and contains 32 underground stations. The transportation capacity is expected to reach 1.24 million passengers per day in 2021 and 2.45 million passengers per day in 2043. The project is designed as a ring line around the most populated area of the city in order to meet the growing demand of urban transportation and to reduce local people's high reliance on carbon-intensive transportations, especially private automobiles and motorcycles.	42,058.43	3,000.00	420.00	60.52	1.00%	43.20	451.51	895.71	142,415.92	1,422.18	407,568.03	4,070.02
Project 3	Metro	Xiamen, Fujian, China	This electrified urban metro project locates in one of the major coastal city in south-eastern China. The project is designed to connect the local high-speed railway station and the new city airport which is currently under construction. It is expected to benefit both local residence and regional travelers. The project is 36.7 km in length, which includes 29.2km underground section and 6.92km elevated section. The project also contains 26 stations. The transportation capacity is expected to reach 400 thousand passengers per day in 2023 and 910 thousand passengers per day in 2045.	29,133.84	18,000.00	5,125.87	738.67	17.59%	36.72	146.58	332.15	33,082.41	5,820.59	191,042.60	33,612.45
Total	/	/	/	77,028.71	23,000.00	6,295.87	907.28	/	89.38	651.24	1,345.64	180,628.70	7,902.04	646,352.45	43,817.43



## Honor and Awards

Industrial bank was awarded *Largest emerging markets bond to a trillion market* by Climate Bond Initiative (“CBI”), part of its 4th Annual “Green Bond Pioneer Awards”, on Mar 2019.

Mr. Sean Kidney, CEO of Climate Bonds Initiative, said, “The Green Bond Pioneer Award is a recognition of Industrial Bank’s outstanding green finance leadership towards a trillion market. Climate Bonds salutes Industrial Bank for being 2018’s largest green bond issuer from China and the second globally, being a key player in driving growth and building investor confidence in emerging markets. With this Award, we commend the Bank for its wide support of sustainable development and climate action.”

For more information, please visit CBI’s official website: <https://cbi19.climatebonds.net/past-events/2019>







## Third-party engagements, Disclosure and Reporting



CICERO  
Dark Green

### Framework SPO:

IB has engaged Center for International Climate Research (“CICERO”) to act as an external reviewer and second opinion (“SPO”) provider of this Green Bond Framework for Green Bond Principles (“GBP”) alignment. CICERO finds the Framework to be aligned with GBP and offers a **Dark Green Shading**.



Climate  
Bond  
Certified



### Pre-issuance Certifications:

The Green Bonds issued on Nov 20th 2018 are **Climate Bonds Certified** (pre-issuance).

The USD tranche has also obtained Hong Kong Quality Assurance Agency (“HKQAA”) **Green Finance Certification** (pre-issuance).



Climate  
Bond  
Certified



SUSTAINALYTICS

### Post-issuance Certifications:

The Green Bonds issued on Nov 20th 2018 are **Climate Bonds Certified** (post-issuance for the year of 2018 and 2019).

IB has also engaged Sustainalytics as an independent third party to provide an **Assessment Report** (the “Assessment Report”) on its 2019 Annual Green Bond Report which provides information on allocation and impacts.



The framework, Second Opinion report, Certifications, Verification Letter, Letter of Approving and Assessment Report are publicly available on IB’s website at:

[www.cib.com.cn/en/aboutCIB/about/notice/20181107.html](http://www.cib.com.cn/en/aboutCIB/about/notice/20181107.html)



# Appendix 1: Impact Reporting Methodology

## Ex-ante Projections

Environmental impact data reported for IB's general green finance portfolio as well as green bond allocation are ex-ante estimations during project design mostly for direct project impacts once projects are at normal operating capacity. They are prepared using the combination of national standards and IB's self-developed methodology.

## Regulations and Standards Applied

Environmental impacts are either directly extracted from or calculated by data provided in "Project feasible study reports (项目可行性研究报告)", which is prepared by professional third-parties as a prerequisite for all project investment according to national regulation. IB will only approve project financing whose feasible study reports as well as environmental impacts projections has been reviewed and approved by National and Local Development and Reform Commission (NDRC, 国家发展改革委员会) or other official agencies.

The calculation of environmental impacts based on "Project feasible study reports" has applied the following standards: Guidelines for Calculation Energy Saving and Emission Reduction for Green Credit Projects (绿色信贷项目节能减排量测算指引) by China Banking and Insurance Regulatory Commission's (CBIRC, 中国银行保险监督管理委员会)

General Technical Rules for measurement and verification of energy saving GB\_T 28750-2012 (节能量测量和验证技术通则) and General Principles for calculation of the comprehensive energy consumption GB\_T 2589-2008 (综合能耗计算通则) by China Administration of Quality Supervision, Inspection and Quarantine (AQSIQ, 中国国家质量监督检验检疫总局).

The method involves calculation of baseline settings, absolute and relative emission, and is similar to EIB Carbon Footprint Methodology.

## GHG Emission avoid projection in Transportation Projects

In order to make comparison between environmental benefit of Low Carbon and Low Emission Transportation Projects, IB has introduced the EIB Carbon Footprint Methodology to calculate GHG emission avoided, considering the complexity and absence of a widely accepted methodology globally. The projection involves estimation of Baseline scenario and calculation of Absolute and Relative Emission. Absolute emission of projects is calculated by estimated energy consumption (kWh) of projects multiplied by weighted average CO<sub>2</sub> emission intensity (g/kWh) within local electric power grid. Baseline emission is calculated by multiplying estimated total transportation capacity in distance (transportation capacity in number of passengers per year \* average distance per trip) with baseline weighted average CO<sub>2</sub> emission intensity (g/KM per passenger) in local area. Surveys on local residence's transportation pattern are conducted to calculate baseline weighted average CO<sub>2</sub> emission intensities (g/KM per passenger) of each project.

## Reporting for co-financed projects

IB usually co-finance projects with local business owners or other lenders. In order to more accurately reflect IB's participations in environmental benefits generated by these projects, IB reports environmental impacts at both project level and IB share level. Dividable impact factors, including burned coal avoided, CO<sub>2</sub> emission reduction, SO<sub>2</sub> emission reduction and NO<sub>x</sub> emission reduction are reported at both project level and IB share level. IB share level is calculated by Project level impact result\*(Amount allocated/Total investment). Non-dividable impact factors, including Generator Capacity, Annual Power Output, length of tracks and passengers transported per year are reported at project level only.



## Appendix 2: List of Abbreviations

CBI	Climate Bond Initiative
CBIRC	China Banking and Insurance Regulatory Commission
CICERO	Center for International Climate Research
CO <sub>2</sub>	Carbon dioxide
COD	Chemical oxygen demand
eq.	Equivalent
EUR	Euro
EURIBOR	Euro Interbank Offered Rate
FRN	Floating-Rate Note
GBP	Green Bond Principles
GEAH	Generating Equipment Availability Hours
GFC	China Green Finance Committee
GHE	Greenhouse effect
GHG	Greenhouse gas
GWh	Gigawatt hours (equal to 1,000 MWh or 1,000,000 kWh)
HKQAA	Hong Kong Quality Assurance Agency
IB, or Industrial Bank	Industrial Bank Co., Ltd.
km	Kilometers
km <sup>2</sup>	Square kilometers
kV	Kilovolts
kW	Kilowatt
kWh	Kilowatt hours
LIBOR	London Inter-bank Offered Rate
MTN	Medium Term Note
MW	Megawatts
MWh	Megawatts hours
NH <sub>3</sub> -n	Ammonia nitrogen
NO <sub>x</sub>	Nitrogen oxide
PBoC	People's Bank of China
Reg S	Regulation S
RMB	Renminbi
SO <sub>2</sub>	Sulfur dioxide
SPO	Second party opinion
tce	Tons of coal equivalent
USD	US dollar
yr	years