



# GREEN DEBENTURES

IMPACT REPORT 2021



12 November 2021

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Eligible Green Project **Impact**

**RATCH Group Public Company Limited** (formerly named as Ratchaburi Electricity Generating Holding Public Company Limited ) is a leading Independent Power Producer in Thailand, with an ambitious vision aiming to become a leading value-oriented energy and infrastructure company in Asia Pacific.

RATCH seeks to equity invest in core companies, subsidiaries, and/ or joint ventures, subject to its shareholding proportion. Its investment is mainly focused on fossil fuel power generation projects, renewable projects, businesses adjacent to electricity generation and energy as well as infrastructure businesses both in Thailand and internationally. Its main incomes are in forms of electricity sales and services.

As of September 2021, RATCH accounts the total equity installed capacity of 8,290.33 megawatts. Capacity of 7,052.95 megawatts has commercially been operated and 1,237.38 megawatts is under development and construction phases. At Present, RATCH’s operations are located in Thailand (5,226.03 megawatts), Australia (1,250.29 megawatts), Lao PDR (1,193.09 megawatts), China (236 megawatts) Indonesia (193.05 megawatts) and Vietnam (191.87 megawatts).

Goal 2025				
To seek new investment to maintain production capacity of 10,000 megawatts to compensate the expired production capacity or to increase enterprise value to Baht 200,000 million	To expand investment in business that is in value chain and other infrastructure business for optimum benefit	To generate revenue from overseas investment to no less than 50 percent of the Company’s total revenue	<b>To increase production capacity from renewable energy business by no less than 25 percent of the total capacity</b>	To be a high performance organization



Core Strategies				
<b>S1:</b> Optimize current asset efficiency and manage project in development to meet goals and budget	<b>S2:</b> Further development of new power and infrastructure projects in established markets	<b>S3:</b> Seek partners for the expansion of electricity business in new markets	<b>S4:</b> Increase value through business expansion in related and other businesses	<b>S5:</b> Strengthen organizational capability



## The Thai Bond Market Association's Best Bond Award

- ◆ **Deal of the Year Award**  
An award given to the most outstanding and successful issuance of bond in private sector, as recognized by wide range of investors in 2020.
- ◆ **Environmental, Social and Governance Bond (ESG Bond) Private Sector**  
An award given to private sector's bond that was issued under Green, Social Sustainable Financing Framework and could appropriately respond to investors' demands



## The Asset Triple A Sustainable Capital Markets Regional Awards

- ◆ **Best Local Currency Green Bond**  
An regional-level award given to a company that had successfully raised fund by issuing green bonds for the first time. The fund raised from such bond issue would be fully used in wind power projects and MRT projects (Eligible green projects) and it was also the first time the issuer used assurance report instead of second party opinion report and such report was well recognized.



# Green Financing FRAMEWORK

The Green Financing Framework articulates how RATCH intends to raise Green Debentures, debentures or loans to finance and/or refinance new and existing projects with environmental benefits. The RATCH Green Financing Framework also follows the recommendations of the ICMA Green Bond Principles / LMA Green Loan Principles / ASEAN Green Bond Standards regarding “External Review”



Use of Proceeds



Process for project evaluation and selection



Management of Proceeds



Reporting



External Review

## REFERENCE PRINCIPLES

- International Capital Market Association (“ICMA”) Green Bond Principles (“**GBP**”) 2018;
- The ASEAN Capital Markets Forum (“ACMF”) ASEAN Green Bond Standards (“**ASEAN GBS**”) 2018;
- LMA / APLMA / LSTA Green Loan Principles (“**GLP**”) 2020.



## EXTERNAL REVIEWER



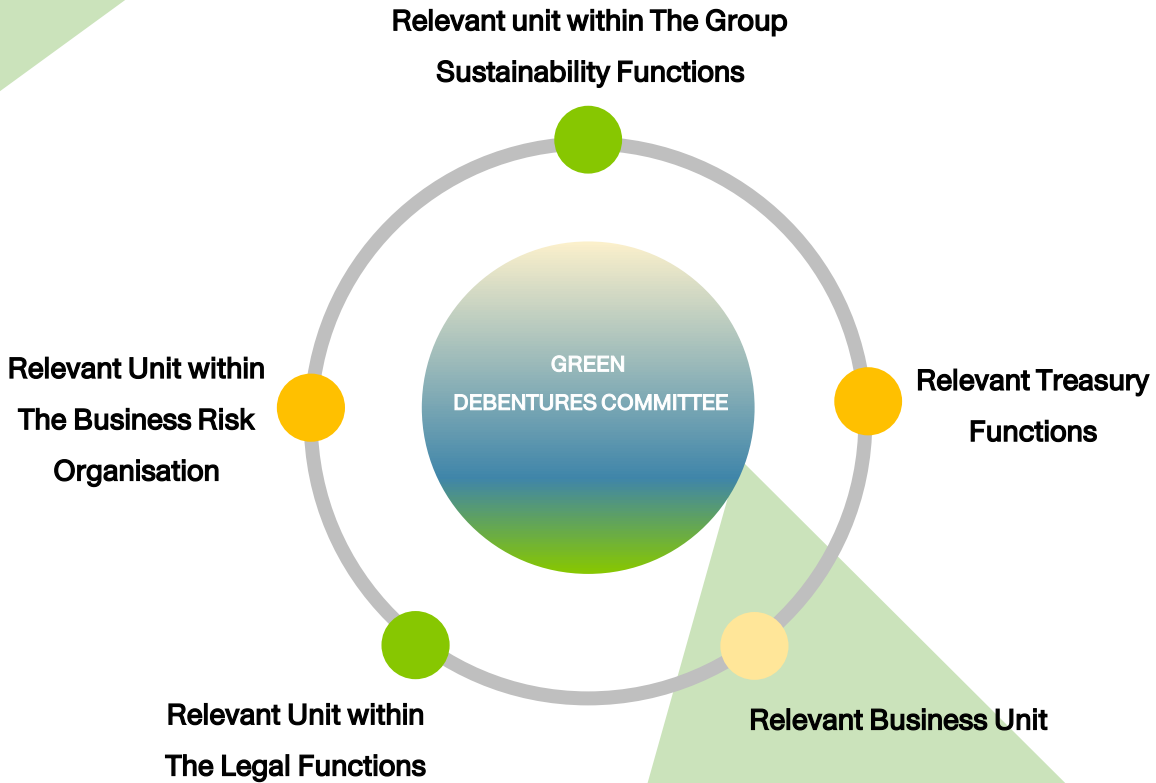
	Alignment with ASEAN / ICMA GBP	Eligible Projects Description	Alignment with UN SDGs
<b>Renewable Energy</b> 	<b>Renewable Energy</b>	Expenditures to support the development, installation, operation and connection of renewable energy, including: <ul style="list-style-type: none"> <li>• Wind power</li> <li>• Solar power</li> <li>• Biomass power</li> <li>• Hydropower under 25 MW</li> </ul>	 
<b>Clean Transportation</b> 	<b>Clean Transportation</b>	Engineering design and construction, machinery and electrical systems, operation and maintenance of MRT Pink Line (Khae Rai-Min Buri) and MRT Yellow Line (Lat Phrao-Sam Rong), green transport projects, which promote clean transport services and modal shift towards public transportation, including Mass Rail Transport systems and Electric Vehicle infrastructure	 
<b>Information &amp; Communications Technology</b> 	<b>Energy efficiency</b>	Investment in an installation of fiber optic network and related equipment to be used in communication cable relocation projects supported by the Government, covering potential areas in Thailand. The projects will create the network of the future, energy consumption reduction, more efficient and cleaner with a positive effect on environmental and society. The design and/or installation of fiber optic network and technology that are designed to reduce energy consumption or mitigate GHG which in consistent with RATCH's goals.	 
<b>Water Management</b> 	<b>Sustainable water and wastewater management</b>	Improvement in water supply infrastructure in order to increase efficiency and accessibility of water delivery system	  





# Process for Project Evaluation and Selection

For the governance of RATCH’s Green Financing Framework, RATCH has set up a Green Debentures Committee (“Committee”) consisting of the following members:



## RESPONSIBILITIES OF GREEN DEBENTURES COMMITTEE

The Committee will select Eligible Green Projects that meet the criteria for use of proceeds described above. Projects must also comply with all applicable laws and regulations, and RATCH’s policies and guidelines.

The Committee will review and approve annually the projects complying with the environmental objectives and falling under one or more of the use of proceeds projects categories.

The Committee will review the allocation of the proceeds annually to ensure maximum allocation of Green Debenture proceeds and facilitate ongoing Green Debenture reporting.

The Committee will carry out an analysis of climate and environmental issues specific to each investment decision. The Financial Planning Department will control and validate the allocation of the proceeds to Eligible Green Projects.





## DEDICATED GREEN FINANCE ACCOUNT

The net proceeds of Green Financing instruments will be transferred to the dedicated green finance account of RATCH.



## PROCEEDS TRACKING SYSTEM

RATCH has a well laid internal tracking system which shall be used to monitor, establish and account for the allocation of the proceeds for such Eligible Green Projects



## BALANCE OF THE NET PROCEEDS ADJUSTMENT

The balance of the net proceeds will be periodically adjusted to match allocations to Eligible Green Projects made during the life of the financing instruments.



## SUBSTITUTION OF PROJECTS

If for any reason some projects are no longer eligible, RATCH will use its best efforts to substitute such projects as soon as is practical, once an appropriate Eligible Green Project for substitution has been identified by the Committee.



## UNALLOCATED PROCEEDS

RATCH will aim to fully allocate the proceeds to the Eligible Green Projects within 2 years of Issue date.



## Reporting



### IMPACT REPORT

### ALLOCATION REPORT

Where feasible, the Committee will aim to report the following information:

- The percentage of an amount equal to the net proceeds allocated to Eligible Green Projects (% financed by Green Debentures)
- The percentage of financing/refinancing of projects
- Descriptions of the projects including country/location
- Balance of the unallocated proceeds

- Where feasible, the Committee will aim to report annually on the estimated environmental and social impacts arising from the implementation of the Eligible Green Projects.
- In case of co-financing, the Committee will aim to report on the pro rata share of impact or provide the share of financing from Green Financing instrument proceeds as a percentage of total project financing if total project impact is being reported.
- The impact reporting will also provide information on the methodology and assumptions used for calculation of the impact metrics.

### GREEN FINANCING FRAMEWORK

The Framework will be published on RATCH's website



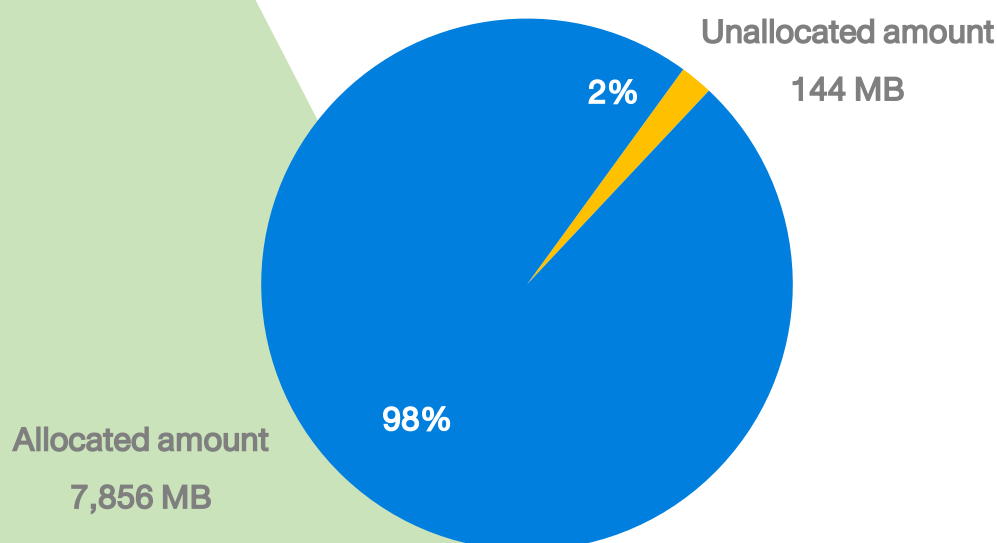
# Green Debenture PORTFOLIO

On November 4, 2020 , The company issued 8-billion-baht the Senior and Unsecured Green Debentures (or Environmental Conservation Bond) with Debenture Holders’ Representative for investment, repayment of existing loans in part and/or in whole of the new or existing eligible green projects related to environmental conservation, including the wind power plant projects in Australia and the Pink-Line and Yellow-Line electric monorail projects. The debentures’ offered as private placement to institutional investors and high net worth. The series of Green Debentures consists of four tranches with average maturity of 11 years.

Issued Date	Maturity Date	Term to Maturity (Years)	Coupon Rate (%)	Amount (Million Bath)
4 Nov 2020	4 Nov 2023	3	1.32	1,000
4 Nov 2020	4 Nov 2025	5	1.76	1,500
4 Nov 2020	4 Nov 2030	10	2.61	1,500
4 Nov 2020	4 Nov 2035	15	2.94	4,000

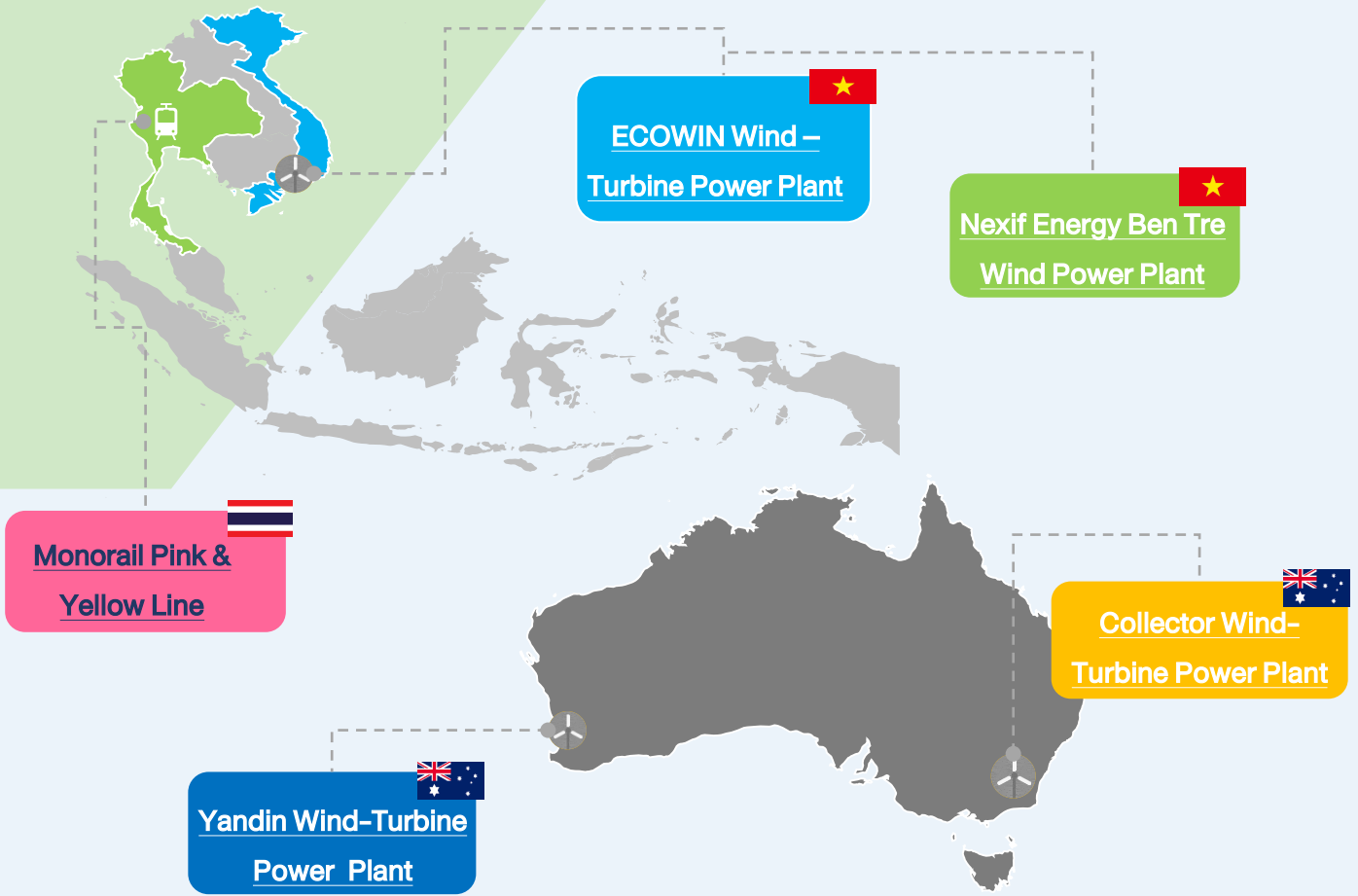
## Green Project ALLOCATION

As of 30 September 2021 RATCH has allocated 98% of the THB 8,000 Million Green Debentures in financing and refinancing the Eligible Green Projects in in Australia and Vietnam and Thailand.

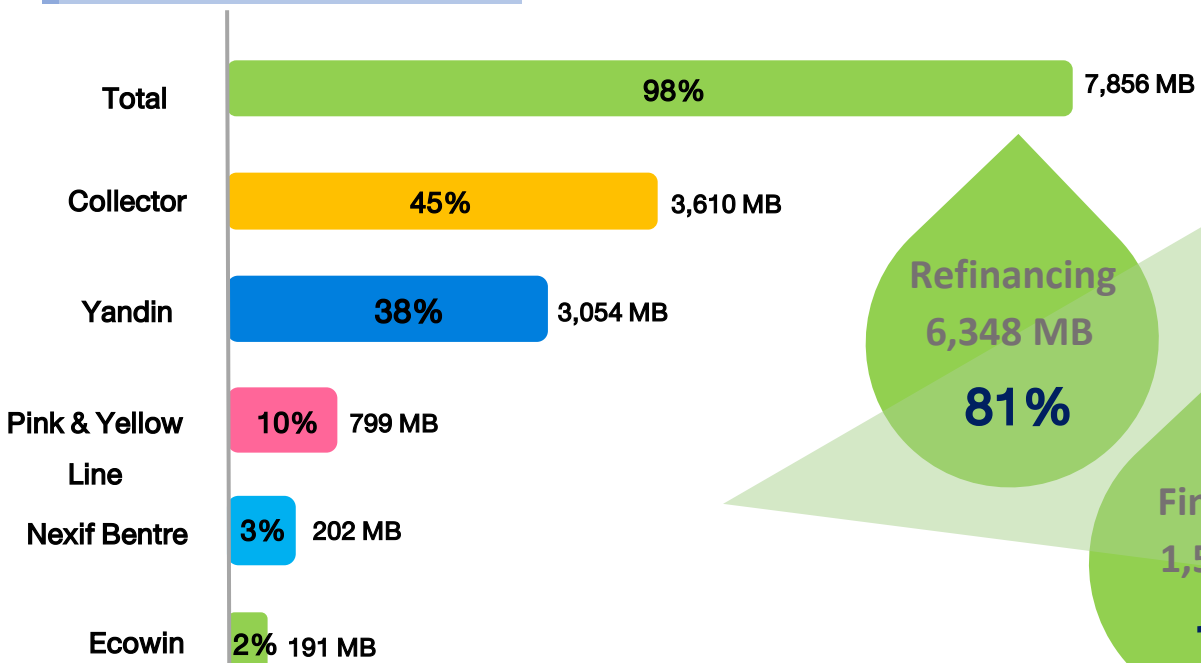


# Green Project ALLOCATION

## Geographic Allocations



## Allocations Amount (Million THB)



Refinancing  
6,348 MB  
**81%**

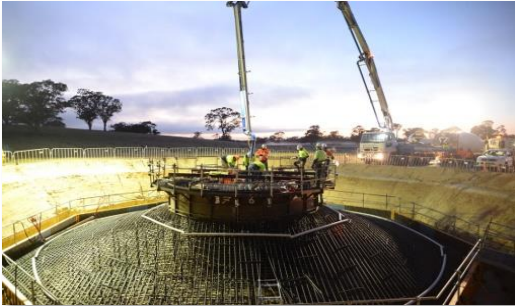
Financing  
1,508 MB  
**19%**



## Renewable Energy



### Collector Wind-Turbine Power Plant



**Location :** New South Wales, Australia

**COD :** April 2021

**RATCH Stake :** 100%

**Attributable Capacity :** 226.80 MW

**Net Electric Power (Apr – Sep 2021) :** 267,164 MWh

**\* Emission Reduction (Apr – Sep 2021) :** 211,060 tCO<sub>2e</sub>



### Yandin Wind-Turbine Power Plant



**Location :** North of Perth, Western Australia

**COD :** March 2021

**RATCH Stake :** 70%

**Attributable Capacity :** 149.94 MW

**Net Electric Power (Mar – Sep 2021) :** 389,069 MWh

**\* Emission Reduction (Mar – Sep 2021) :** 264,567 tCO<sub>2e</sub>



### Nexif Energy Ben Tre Wind Power Plant



**Location :** Ben Tre Province, Vietnam

**Expected COD :** 1Q/2023

**RATCH Stake :** 50%

**Attributable Capacity :** 40 MW

**Sources :** \* National Greenhouse and Energy Reporting(Measurement) Determination 2008 (Schedule1) and Department of industry, Science, Energy and Resources.



### ECOWIN Wind-Turbine Power Plant



**Location :** Ben Tre Province, Vietnam

**Expected COD :** Q4/2021

**RATCH Stake :** 51.04%

**Attributable Capacity :** 15.16 MW



### CLEAN TRANSPORTATION



### Pink Line Project



**Technology:** Monorail

**Route:** Khae Rai-Min Buri

**Expected COD:** 2022

**RATCH Stake :** 10%



### Yellow Line Project



**Technology:** Monorail

**Route:** Lad Prao-Sam Rong

**Expected COD:** 2022

**RATCH Stake :** 10%