

PNB

Merdeka
Ventures

GREEN SUKUK IMPACT REPORTING AS AT 31 DECEMBER 2024 FOR MERDEKA ASEAN GREEN SRI SUKUK (“MAGSS”) PROGRAMME



Agenda

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BACKGROUND

01

Background

1. On December 29, 2017, PNB Merdeka Ventures Sdn. Berhad (“PNB Merdeka Ventures”) issued the RM2.0 billion Merdeka ASEAN Green SRI Sukuk (“MAGSS”) Programme for the construction of the office portion of the Merdeka 118 tower. To date, full drawdown of RM2.0billion has been made from the MAGSS Sukuk Programme.
2. Prior to the issuance, PNB Merdeka Ventures developed the Green Sukuk Framework in order to ensure transparency, disclosure and integrity for the issuance of MAGSS. The framework was based upon guidelines established by “The Green Bond Principles” published by the International Capital Market Association”. In order to enable the investors to follow the development, PNB Merdeka Ventures will provide an annual letter to investors to report on the following:
 - i. The total amount disbursed funds and use of the funds
 - ii. Environmental impact reporting on energy and CO2, water and waste.
3. Year 2024 is the first year of operation for the office floors at the Merdeka 118 Tower. As such, information on the values reported for the environmental impact was only available upon handover from the contractor.

GREEN SUKUK FRAMEWORK

02

The Green Sukuk Framework (1/8)

Introduction

Permodalan Nasional Berhad (“PNB”) was incorporated on 17 March 1978 and is a wholly-owned subsidiary of Yayasan Pelaburan Bumiputra (Bumiputra Investment Foundation). Yayasan Pelaburan Bumiputra was established in January 1978 to formulate policies and guidelines for Bumiputra equity investment participation and PNB was set up as its subsidiary to implement its policies. PNB is the parent company for Amanah Saham Nasional Berhad which operates a number of unit trust schemes. To date, PNB holds a diversified portfolio of investments in asset management, unit trusts, institutional property trusts and property management.

In 2009, PNB announced their proposal to embark on a project to build an integrated development with an Iconic tower in the historic Stadium Merdeka and Stadium Negara enclave. PNB Merdeka Ventures Sdn Berhad (“PNBMV”) was set up as a wholly-owned subsidiary of PNB to undertake this project. The Project named as the Warisan Merdeka development consists of a 118-storey Iconic Tower, retail mall and service apartments. The tower was named Merdeka PNB118 by, comprising office space, a luxury hotel and an observation deck.

The Green Sukuk Framework (2/8)

The Green Sukuk Framework was developed by PNBMV in order to ensure transparency, disclosure and integrity for the issuance of a Green Sukuk. This Green Sukuk Framework is built upon guidelines established by “The Green Bond Principles: published by the International Capital Market Association and having the key components, as follows:

1. Use of Proceeds
2. Sustainability Features
3. Management of Proceeds
4. Reporting

CICERO Center for International Climate Research was retained to review the framework in fulfillment of the Green Bond Principles.

CICERO issued a rating of **Medium Green** for the Framework..



The Green Sukuk Framework (3/8)

1. Use of Proceeds

PNB Merdeka Ventures Sdn Berhad (“PNBMV”), will issue a Green Sukuk of MYR 2 billion .

The proceeds of the Notes issued will be utilized for the Merdeka PNB118 Tower. The Tower is part of the Warisan Merdeka development comprising the 118 storey Tower, a Retail Mall and 3 blocks of Serviced Apartments within the vicinity of Stadium Merdeka in Kuala Lumpur, Malaysia.

Eligible Project

The Merdeka PNB118 Tower is a 118 storey tower consisting of 83 floors of Grade A office space, 16 floors of luxury hotel, 4 floors of observation deck (including restaurant) and 15 floors of sky lobbies and amenities. The Merdeka PNB118 Tower will be the tallest building in South East Asia at approximately 630 metres.

Merdeka PNB118 Tower aspires to be a model for workplace safety and sustainability. It aims to secure multiple green building certifications through the Leadership in Energy and Environmental Design (LEED) 2009 Core and Shell, Green Building Index (GBI) and GreenRe. The mix of the three (3) certification systems benchmarks the project with a more comprehensive cross section of green features than if using only one certification system.

The Green Sukuk Framework (4/8)

2. Sustainability Features

Sustainable features for the Merdeka PNB118 Tower covers the following areas:

Features	Examples
Sustainable Site Planning and Management	i. Multiple public transit connections including a direct in-building connection to Mass RapidTransit (MRT) station and existing connection to the monorail and nearby connections to the Light RapidTransit (LRT) line ii. Accommodations for bike commuting including storage and showers iii. Prioritized accommodations for fuel efficient vehicle parking iv. New public green open space mostly in the form of a new linear park v. Material and tree selections on site to minimize the site’s urban heat island effect
Water Efficiency	i. Grey water and condensate water collection and treatment ii. Water efficient fixtures certified under WELS iii. 100% rain water harvesting and use - mainly for irrigation iv. Metering and leak detection systems.
Energy and Atmosphere	i. Optimized energy performance with district cooling with onsite chilled water energy storage, zoned daylight sensors, tenant sub- metering and high performance lighting ii. Solar water heating panel for supplying hot water to the hotel iii. Building integrated solar photovoltaic (PV) at the south canopies iv. Returned energy regeneration from the lifts v. Lifts with fully regenerative AC drives, sleep mode for lighting and ventilation in lift cabs

The Green Sukuk Framework (5/8)

2. Sustainability Features

Features	Examples
Material Resource Conservation	i. Construction waste management programme diverting a minimum of 75% of construction waste from landfills ii. Prescribed recycled content of installed materials (30%), regional materials (20%), and sustainable certified wood products (50%).
Indoor Environmental Quality	i. Smoke free environment and outdoor air delivery monitoring ii. Prescribed low emitting materials (low VOC, no formaldehyde, etc.) and prescribed indoor pollutant control iii. User controllable thermal comfort including low velocity displacement underfloor cooling iv. Floor layouts that promote daylight and views v. CO2 monitoring and control vi. Construction IAQ plan, construction mold prevention, daylight glare control and acoustic optimization
Sustainable Construction	i. Construction activity pollution control including run-off ii. QLASSIC quality assessment iii. Construction waste management iv. Prescribed reuse of concrete formwork

The Project would also have social benefits such as creation of additional employment opportunities, positive multiplier effect to the whole country and it would also support the growth of local suppliers and service providers. Additionally, the market value of the real properties in the surrounding area would also increase because of the Project. It would also stimulate the growth of tourism sector with its Iconic tower complete with Skydeck which will be a new tourist attraction for Kuala Lumpur.

The Green Sukuk Framework (6/8)

3. Management of Proceeds

The issuer shall open and maintain a Shariah-compliant bank account designated as the **Proceeds Account 1** where the Proceeds Account 1 shall capture monies from:

1. Proceeds from Green Sukuk
2. Equity contribution from PNB
3. Any amount or payment paid by PNB derived from the call of completion guarantee
4. Facilitation fund proceeds (if the funds received during construction period). Funds in the

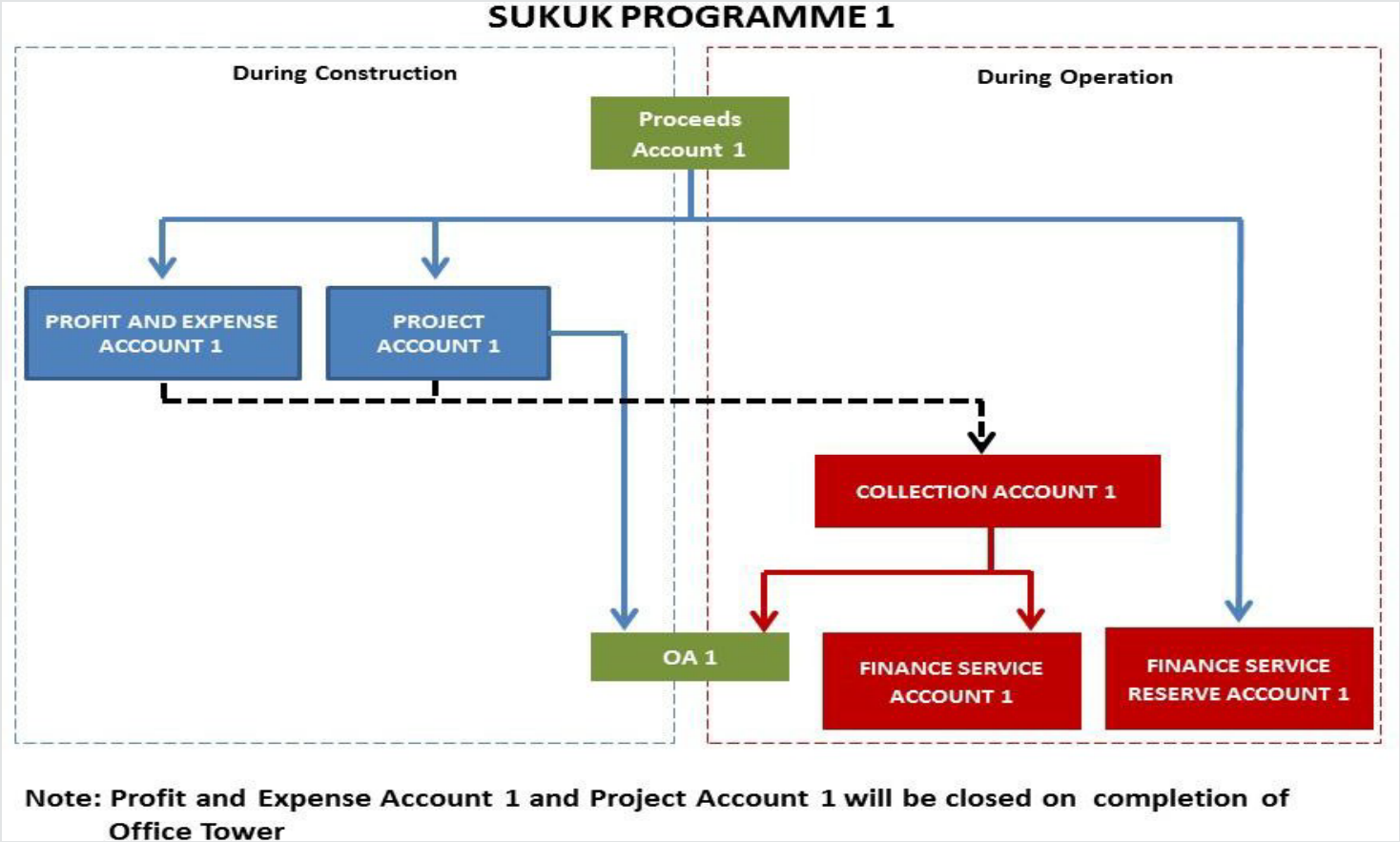
Proceeds Account 1 shall then be transferred to:

1. Project Account 1 to meet the construction cost;
2. Profit & Expense Account 1 – to meet the recurring fees, profit payment obligations and Completion Guarantee fee;
3. Finance Service Reserve Account 1 – to meet the Minimum Required Balance.

The Green Sukuk Framework (7/8)

3. Management of Proceeds

Below is a diagram for the flow of the funds during construction and operation



The Green Sukuk Framework (8/8)

4. Reporting

To enable investors to follow the development, PNBMV will provide an annual letter to investor including;

1. The total amount of disbursed funds and use of the funds
2. Environmental impact reporting on energy and CO₂e, water and waste. For example, Building Management System (“BMS”) which would provide actual energy and water use data including from the solar and water treatment subsystems. Meanwhile CO₂e emissions will be measured using raw data from the BMS, and calculated using relevant electricity grid emission factors.

External Audit

The Green Sukuk programme reinforces our commitment to the environment. Our rigorous periodic monitoring ensure that the project is financially, environmentally and socially responsible. The internal tracking method, the allocation of funds from the Green Sukuk proceeds and the investor letter will be verified by PNBMV External Auditor annually. The opinion of the External Auditor and the investor letter will be made available on PNBMV’s web page www.merdeka118.com

USE OF PROCEEDS

03

Disbursement of Proceeds

- 1. Ernst & Young PLT (“EY”) was engaged to perform limited assurance engagement to report on PNBMV’s management of and use of Greek Sukuk proceeds contained in PNBMV’s Merdeka ASEAN Green SRI Sukuk Annual Reporting for the year ended 31 December 2023.
- 2. There has been no change in the use of proceeds as at 31 December 2024 when compared to the reporting made as at 31 December 2023.

Description	RM million
Original amount earmarked for Eligible SRI Project	2,000.0
Total drawdown as at 31 December 2024	2,000.0
2024	
Total amount unutilised as at 1 January 2024	0.0
Add: Drawdown in 2024	-
Total proceeds available for 2024	0.0
Less: Amount utilised for Eligible SRI project in 2024	0.0
Total amount unutilised as at 31 December 2024	0.0
Analysis of amount unutilised	
Invested in Permitted Investments	-
Deposited in Designated Accounts	-
Total amount unutilised as at 31 December 2024	-

Note:
Appendix I - Independent Limited Assurance Report to the Directors of PNBMV for FYE 31 December 2023

IMPACT REPORTING

04

Green Sukuk Environmental Impact Report (1/4)

The Green Sukuk Environmental Impact Report outlines the quantitative and qualitative impacts for the baseline year (2024) in four key areas below:

No.	Category	Key Metric	Value / Status
1	Energy	Total Energy Consumed	16,708,931 kWh (electricity) 6,009,511 RTh (cooling). Equivalent to approx. 21,135,450 kWh
		Renewable Energy Generated	0 kWh/year <i>Note: 124 kWp solar photovoltaic panel estimated to be operational in Q4-2025.</i>
		Energy Efficiency Measures	Key energy efficiency measures and sustainability features: i. High-performance façade glazing ii. Under-floor air conditioning iii. Daylight sensors and automatic blind controls iv. Centralized district cooling plant
2	CO ₂	Total CO ₂ e Emissions (Scope 1 & 2)	Scope 1: 1.1 tonnes CO ₂ e Scope 2: 12,933 tonnes CO ₂ e (location-based) Scope 2: 6,864 tonnes CO ₂ e (market-based)
		Emissions Reduction Renewable Energy Certificates	2024 is baseline year. Reductions to be tracked from 2025 onward 47% of electricity consumption was covered by renewable energy via purchase of renewable energy certificates (RECs)
3	Water	Total Water Consumed	119,131 m ³
		Water Savings Achieved Water Reuse & Recycling	2024 is baseline year. Reductions to be tracked from 2025 onward 0m ³ from greywater & rainwater harvesting <i>Note: Digital Water Meter from Building Management System estimated to be operational in Q4-2025.</i>
4	Waste	Total Waste Generated	122.84 tonnes
		Waste Recycled	2024 is baseline year. Reductions to be tracked from 2025 onward
		Waste Reduction Programs	On-site sorting stations and tracking of waste volumes based on contractor-reported landfill weights

Green Sukuk Environmental Impact Report (2/4)

i. Energy

Metric	Methodology	Assumptions
Total Energy Consumed	Electricity: i. Data provided by Merdeka Utilities Sdn Bhd (MUSB) ii. MUSB is the licensed electrical distributor (equivalent to TNB) for the Merdeka 118 Precinct iii. Data reported in kilowatt-hours (kWh) Cooling: i. Data provided by MUSB ii. MUSB operates the District Cooling Plant, which supplies chilled water to the entire Merdeka 118 Precinct iii. Cooling energy reported in refrigeration tonnes-hour (RTh) and converted to kWh using the formula: 1 RTh = 3.517 kWh	i. Full-year data covers the period from 1 January to 31 December 2024 ii. Reported energy consumption includes the building shell, core, common areas, and surrounding infrastructure iii. Internal electricity consumption by tenants is excluded from this analysis
Renewable Energy Generated	i. Energy generated from the solar photovoltaic (PV) panel located at the South Canopy ii. Data captured via the Building Management System (BMS) and Centralized Energy Monitoring System (CEMS)	i. No energy generation in 2024 as the PV system has not yet been commissioned ii. Target commissioning is scheduled for Q4 2025
Energy Efficiency Measures	Key sustainability and energy efficiency features implemented: i. High-performance façade glazing ii. Under-floor air distribution system iii. Daylight sensors and automated blind controls iv. Centralized district cooling plant	All energy efficiency measures listed above were fully operational throughout 2024

Green Sukuk Environmental Impact Report (3/4)

ii. CO₂e Emissions

Metric	Methodology	Assumptions
Total COe Emissions (Scope 1 & 2)	Scope 1: i. Emissions from internal energy generation using emergency generators ii. Fuel data sourced from Facilities Management records Scope 2: Calculated by multiplying total electricity consumption with the latest Grid Emission Factor as published by the Energy Commission of Malaysia	Scope 1: i. Emergency generators remained under SUJV management in 2024 ii. Generators were only used for testing purposes iii. Emission factor used is based on 2020 Emission Factors Fact File published by the Ministry for the Environment of New Zealand Scope 2: Emission factor used is based on the most recent publication by the Energy Commission of Malaysia. (<i>Link: https://myenergystats.st.gov.my/documents/d/guest/grid-emission-factor-gef-in-Malaysia</i>)
Emissions Reduction	i. Data collected in 2024 will be used as the baseline for comparison against design-based emissions ii. Covers both Scope 1 and Scope 2 emissions iii. Aligned with sustainability certification frameworks (e.g., LEED, GBI)	i. 2024 serves as the baseline year for future tracking ii. Emissions reduction targets are based on 2021 design simulations and sustainability benchmarks
Renewable Energy Certificates (RECs)	i. REC procurement supports compliance with LEED Platinum certification requirements ii. The RECs were sourced from a third-party solar photovoltaic project	i. RECs were procured based on actual electricity consumption data for 2024

Green Sukuk Environmental Impact Report (4/4)

iii. Water

Metric	Methodology	Assumptions
Total Water Consumed	i. Water consumption metered and recorded by the building’s Facilities Management team ii. Data verified against monthly utility bills	Includes water usage for domestic purposes, HVAC/cooling towers, landscaping, and common areas
Water Savings Achieved	2024 serves as the baseline year. Reduction in water usage will be measured and reported from 2025 onwards	Target savings are based on the original green building performance simulations under LEED and GBI certification frameworks
Water Reuse & Recycling	Volumes derived from output data of the rainwater harvesting and greywater treatment systems installed in the building	i. Monitoring equipment is assumed to be properly calibrated ii. Final validated volumes will be confirmed based on full-year 2024 operational logs

iv. Waste

Metric	Methodology	Assumptions
Total Waste Generated	Derived from monthly waste disposal reports from the building’s waste management contractor.	Includes general, recyclable from base building and tenants.
Waste Recycled	Will be calculated from 2025 onward as a percentage of total waste diverted from landfill.	Baseline established in 2024; assumes consistent sorting practices and reporting in future years.
Waste Reduction Programs	Qualitative description of initiatives implemented at the building level.	On-site sorting stations and tracking of waste volumes based on contractor-reported landfill weights

APPENDIX

05

Independent Limited Assurance Report to the Directors of PNB Merdeka Ventures Sdn Berhad ("PNBMV")

Scope

We have been engaged by PNB Merdeka Ventures Sdn Berhad ("PNBMV") to perform a limited assurance engagement, as defined by International Standards on Assurance Engagements, here after referred to as the engagement, to report on PNBMV's management of Green Sukuk proceeds and use of Green Sukuk proceeds (the "Subject Matter") contained in PNBMV's Merdeka ASEAN Green SRI Sukuk Annual Reporting for the year ended 31 December 2023 (the "Report").

Other than as described in the preceding paragraph, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining information included in the Report, and accordingly, we do not express a conclusion on this information.

Criteria applied by PNBMV

In preparing the Subject Matter, PNBMV applied the guidelines set out for PNBMV's Green Sukuk Framework ("Criteria"). The Framework sets out the guidelines for PNBMV Green Sukuk issuance in accordance with the following core components of the Green Bond Principles issued by the International Capital Market Association ("ICMA"): Use of Proceeds, Management of Proceeds and Reporting. Such Criteria were specifically designed for the PNBMV's Green Sukuk issuance. As a result, the subject matter information may not be suitable for another purpose.

PNBMV's responsibilities

PNBMV's management is responsible for selecting the Criteria, and for presenting the Subject Matter in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the subject matter, such that it is free from material misstatement, whether due to fraud or error.

EY's responsibilities

Our responsibility is to express a conclusion on the presentation of the Subject Matter based on the evidence we have obtained.

We conducted our engagement in accordance with the *International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* ('ISAE 3000'), and the terms of reference for this engagement as agreed with PNBMV on 6 June 2023.

Those standards require that we plan and perform our engagement to obtain limited assurance about whether, in all material respects, the Subject Matter is presented in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

EY's responsibilities (cont'd.)

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

Our Independence and Quality Control

We have maintained our independence and confirm that we have met the requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants and have the required competencies and experience to conduct this assurance engagement.

EY also applies International Standard on Quality Control 1, *Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements*, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Description of procedures performed

Procedures performed in a limited assurance engagement vary in nature and timing from and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

Although we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.

A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the management of Green Sukuk proceeds and use of Green Sukuk proceeds and related information and applying analytical and other appropriate procedures.

Our procedures included:

- Reviewing the implementation of PNBMV's procedures in relation to how management used and managed Proceeds appropriately;
- Checking the accuracy of calculations performed;
- Confirming internal systems and process were functioning as indicated and obtaining supporting evidence; and
- Obtaining and reviewing evidence to support key assumptions and other data.

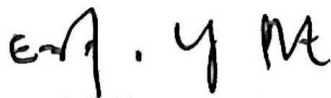
We also performed such other procedures as we considered necessary in the circumstances.

Conclusion

Based on our procedures and the evidence obtained, we are not aware of any material modifications that should be made to the management of Green Sukuk proceeds and use of Green Sukuk proceeds for the year ended 31 December 2023, in order for it to be in accordance with the Criteria.

Restricted use

This report is intended solely for the information and use of the directors of PNBMV only, and in accordance with the terms of reference for this engagement as agreed with PNBMV in relation to PNBMV's Green Sukuk issuance and is not intended to be and should not be used by anyone other than those specified parties. We do not therefore accept or assume any responsibility for any other purpose or to any other person or organization. Any reliance any such third party may place on the Green Sukuk post-issuance is entirely at its own risk. No statement is made as to whether the criteria are appropriate for any third-party purpose.



Ernst & Young PLT
24 May 2024
Kuala Lumpur, Malaysia