

Singapore Green Bond Report

For the Financial Year 2023



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1. Foreword



Indraneel Rajah

Minister in the
Prime Minister's Office

Second Minister for
Finance and National
Development

Chair of the Green Bond
Steering Committee

More frequent extreme weather events in recent years are constant reminders that climate change is an existential challenge. Our fight against climate change requires collective effort and urgent action, and critically, we have to marshal the resources for change. Green finance plays a pivotal role in driving the global transition to a low-carbon future.

Singapore has been working closely with partners, bilaterally and multilaterally, to develop international carbon markets under Article 6 of the Paris Agreement. We also launched the Singapore-Asia Taxonomy, which enables investors and financiers to better identify and catalyse economic activities that contribute meaningfully to sustainability in the region.

The Singapore Green Bond Framework remains a key pillar of Singapore's efforts to channel investments into projects that will advance our sustainability efforts and contribute towards our net zero goal. We are updating the Singapore Green Bond Framework to align with the Singapore-Asia Taxonomy. We hope this will encourage broader adoption of the Taxonomy by industries, to develop a more cohesive and effective regional market for green investments.

This second edition of our Singapore Green Bond Report provides an update on the progress made in our national green bond programme, building on the foundation laid in last year's report.

I am very encouraged by the keen interest from the investment community in our green bond issuances and the feedback received on our inaugural report. Our ongoing dialogues with industry partners will help ensure that our initiatives continue to evolve and remain aligned with global norms and requirements.

As Singapore continues making strides towards a greener and more sustainable world, we actively seek to uphold the market best practices for our green bond programme. We welcome all constructive feedback and suggestions to help us refine and update our initiatives in green finance.

I look forward to continued collaboration with our partners as we work towards our shared goal of a greener future.

2. Key Updates

This Singapore Green Bond Report covers the allocation of proceeds from Singapore’s sovereign green bonds (i.e. Green Singapore Government Securities (“SGS”) (Infrastructure) bonds) issued under the Singapore Green Bond Framework, as well as the expected environmental impact arising from the financed Eligible Green Expenditures for the Financial Year (“FY”) 2023 (i.e. between 1 April 2023 and 31 March 2024) (“Reporting Period”).

Singapore’s overarching climate strategy, the Singapore Green Bond Framework, and our methodology for estimating the impact of our allocated green bond proceeds were covered in our inaugural report for FY2022. For investors who are already familiar with the FY2022 report, this section summarises key updates on our Green SGS (Infrastructure) issuance and the allocation of proceeds in the Reporting Period, and the corresponding expected impact. New investors can refer to subsequent sections for more details on our overarching climate strategy, Green Bond Framework, and impact methodology.

2.1 Green SGS (Infrastructure) Issuance

The Government re-opened the 50-year Green SGS (Infrastructure) bond in September 2023, with an issuance size of S\$2.8 billion (“re-opened tranche”). The issuance saw strong market demand, with an overall subscription rate of 1.4 times that allowed the Government to issue at the top end of the targeted size range.

2.2 Allocation Report

In FY2023, S\$2.1 billion of green bond proceeds, comprising S\$1.7 billion of the inaugural Green SGS (Infrastructure) bond (“inaugural tranche”) issued in August 2022 and S\$0.4 billion of the re-opened tranche, were allocated to finance the expansion of the electric rail network in Singapore, namely the Jurong Region Line (“JRL”) and Cross Island Line (“CRL”).¹

Unallocated proceeds of the re-opened tranche totalling S\$2.4 billion are expected to be fully allocated to the JRL and CRL by the end of FY2025.

Allocation of Green SGS (Infrastructure) Bonds

Green SGS (Infrastructure) Bonds	Issue Date	Issuance Size (S\$)	Allocation in FY2022 (S\$)	Allocation in FY2023 (Reporting Period) (S\$) ²	Total allocation as at 31 March 2024 (S\$)
Inaugural tranche	15 August 2022	2,400,000,000	708,656,367	1,691,343,633	2,400,000,000 ³
Re-opened tranche	4 September 2023	2,800,000,000	Not applicable	396,961,276	396,961,276
		Total Allocation	708,656,367	2,088,304,909	2,796,961,276

¹ Figures rounded to one decimal place. Please refer to the table for the exact allocation figures.

² PricewaterhouseCoopers LLP has undertaken a limited assurance engagement on the allocation of proceeds for the financial year ended 31 March 2024 raised through the issuance of the Green SGS (Infrastructure) bonds. The assurance report can be found in Section 6 of this report.

³ As at 31 March 2024, 100% of the inaugural tranche have been allocated.

2.3 Impact Report


Overall, the JRL and CRL will have a combined estimated impact of avoiding between 100,000 and 120,000 tonnes of CO₂-equivalent (i.e. greenhouse gas (“GHG”)) project emissions annually.⁴ This represents an 81% reduction in GHG emissions compared to the baseline, and would be equivalent to taking at least 22,000 cars off Singapore’s roads.⁵

The green bond proceeds allocated to the JRL and CRL (i.e. S\$2.8 billion as at 31 March 2024) are expected to have a financed impact of between 4,700 and 7,100 tonnes of GHG emissions avoided annually.⁶ Every S\$1 million of allocated Green SGS (Infrastructure) bond proceeds therefore contributes to the avoidance of between 1.7 and 2.5 tonnes of GHG emissions annually.

While it is not possible to attribute the number of jobs created to specific rail lines, the upcoming expansion of the rail network is expected to create about 800 jobs.

Please refer to the subsequent sections of this report for more information. The Singapore Green Bond Report for FY2022, and the project descriptions of JRL and CRL can be found at the respective websites.⁷

Impact indicators

Portfolio		Clean Transportation
Allocated Amount	S\$	2,796,961,276
Project lifetime	years	99
Project Emissions Avoided	tCO ₂ e/year	99,906 - 122,107
Financed Emissions Avoided	tCO ₂ e/year	4,737 - 7,076
Emissions Avoided per S\$ Million Allocated	tCO ₂ e/year/ S\$'million	1.7 - 2.5
Relative Emissions Avoided	%	81
Project Air Pollutants Reduced	kg/year	SO _x : 20,494 - 25,049 NO _x : 26,132 - 31,939 PM ₁₀ : 1,311 - 1,602 PM _{2.5} : 940 - 1,149
Financed Air Pollutants Reduced	kg/year	SO _x : 972 - 1,452 NO _x : 1,239 - 1,851 PM ₁₀ : 62 - 93 PM _{2.5} : 45 - 67
Passenger-kilometers Travelled	million pkm/year	2,207 - 2,697
Length of Rail	km	74
Contribution to SDG		 11 SUSTAINABLE CITIES AND COMMUNITIES

⁴ Figures rounded to two significant figures. Please refer to the table for the exact impact figures. Project emissions avoided refers to the reduction of GHG emissions between a baseline scenario in which the JRL and CRL do not exist, compared to the project scenario in which the JRL and CRL become fully operational and displace a mix of existing and future transportations along the same travel distance. Please refer to Section 5.1 for elaboration on the methodology for the impact report.

⁵ MOF’s estimate based on the United States Environmental Protection Agency (EPA)’s assumption that an average passenger car emits about 4.6 tonnes of CO₂-equivalent per year. EPA’s figure is likely to be slightly higher compared to the emission factor in Singapore’s context.

⁶ Financed emissions avoided is derived by pro-rating the estimated total project emissions avoided based on the share of green bond financing (i.e. green bond allocated as a proportion of the total project costs). Financed emissions avoided would increase correspondingly in future years as the share of green bonds allocated to the projects increase with construction progress.

⁷ For the Singapore Green Bond Report for FY2022, please refer to <https://go.gov.sg/greenbonds>. For the project descriptions of JRL and CRL, please refer to https://www.lta.gov.sg/content/ltagov/en/upcoming_projects.html#rail_expansion.

3

INTRODUCTION



3. Introduction

3.1 Singapore's Climate Commitment

Climate change is a real and existential threat for Singapore, as a small, low-lying, highly urbanised island-state. The third National Climate Change Study published in January 2024 projected higher temperatures, more wet and dry extreme weather conditions, and accelerating rise in mean sea levels for Singapore and Southeast Asia by the end of the century.

To strengthen our commitments under the United Nations 2030 Agenda for Sustainable Development and the Paris Agreement, Singapore launched the Singapore Green Plan 2030 ("Green Plan") in February 2021, a whole-of-nation movement to advance Singapore's national agenda on sustainable development, through five key pillars and two key enablers.⁸



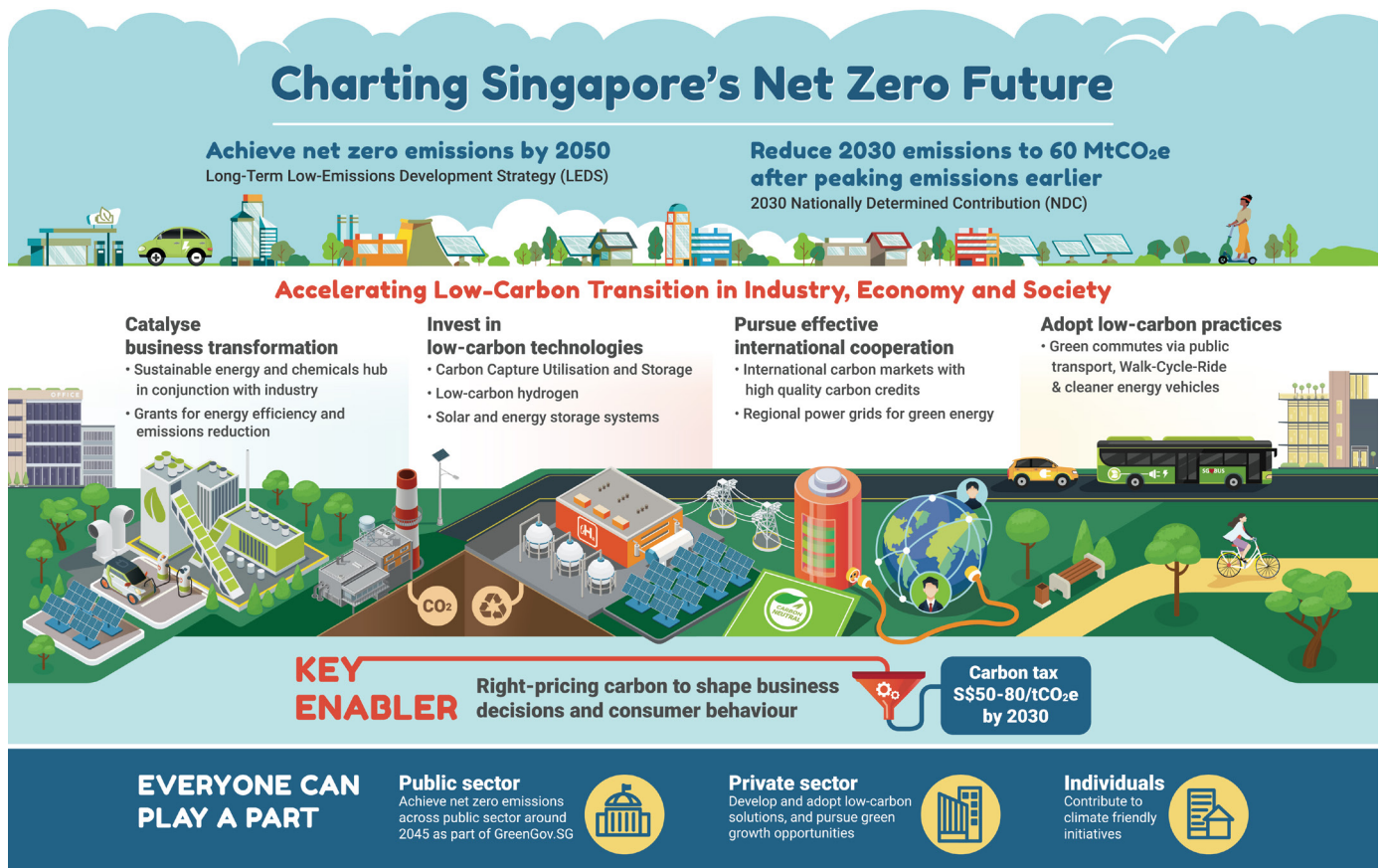
⁸ The five key pillars are City in Nature, Energy Reset, Green Economy, Resilient Future and Sustainable Living. The two key enablers are Green Citizenry and Green Government. More information on the Green Plan can be found at <https://www.greenplan.gov.sg>.

Although Singapore only accounts for around 0.1% of global emissions, we are deeply committed to contributing to global efforts to address the climate crisis. Singapore aims to achieve net zero emissions by 2050 as part of our updated Long-Term Low-Emissions Development Strategy (“LEDS”). We will also reduce emissions to around 60 million tonnes of CO₂-equivalent in 2030 after peaking emissions earlier, as part of our 2030 Nationally Determined Contribution (“NDC”).⁹

To achieve net zero by 2050, Singapore is accelerating the low-carbon transition for industry, economy and society through four key thrusts:

1. Catalysing business transformation;
2. Investing in low-carbon technologies;
3. Pursuing effective international cooperation; and
4. Adopting low-carbon practices.

Our low-carbon transition is supported by a carbon tax, which puts a price signal on the externalities of carbon. This encourages businesses and individuals to internalise the cost of carbon and take meaningful action to reduce their carbon footprint. Singapore implemented a carbon tax in 2019 and this is the first carbon pricing scheme in Southeast Asia. The carbon tax was raised to S\$25 per tonne since 1 January 2024, and will be progressively raised to between S\$50 and S\$80 per tonne by 2030.



⁹ More information about Singapore's updated LEDS and 2030 NDC can be found at <https://www.nccs.gov.sg/media/publications/singapores-long-term-low-emissions-development-strategy/>

3.2 Singapore Green Bond Framework

The Singapore Green Bond Framework, together with the Significant Infrastructure Government Loan Act 2021 (“SINGA”), provides the foundation for the issuances of Green SGS (Infrastructure) bonds.

SINGA authorises the Government to borrow to finance qualifying capital expenditures of approved nationally significant infrastructure projects critical to Singapore’s long-term development.¹⁰ Legislative controls are in place to safeguard against the over-accumulation of debt, prevent abuse, and ensure fiscal sustainability.¹¹ Borrowing to finance such infrastructure spreads the costs across the generations that would benefit from these projects. For any such nationally significant infrastructure that falls within the eight green categories set out in the Singapore Green Bond Framework, the Government can issue Green SGS (Infrastructure) bonds.

The Singapore Green Bond Framework is aligned with internationally recognised market principles, standards, and best practices. Morningstar Sustainalytics has issued a pre-issuance Second-Party Opinion (“SPO”), which confirmed the framework’s alignment with the International Capital Market Association (“ICMA”) Green Bond Principles 2021 and the ASEAN Green Bond Standards 2018.¹² The Government is in the process of updating the Singapore Green Bond Framework to align with the Singapore-Asia Taxonomy (“SAT”) for relevant green activities.¹³

In addition to governing the Singapore sovereign green bonds, the Singapore Green Bond Framework serves as a national benchmark and reference for Statutory Boards.¹⁴ Statutory Boards that issue green bonds are required to align their respective green bond frameworks with the guidelines and standards set out in the national framework.

Singapore has committed to issuing up to S\$35 billion of green bonds by 2030. This will include green bonds issued by the Government as well as Statutory Boards. As at 31 March 2024, the Singapore public sector has issued a total of S\$12.5 billion of green bonds across four green categories (Table 1).

¹⁰ To qualify as nationally significant infrastructure, the infrastructure project should be controlled and legally owned by the Government, cost at least S\$4 billion, have a useful life of at least 50 years, and would support or materially improve national productivity or Singapore’s economic, environmental, or social sustainability.

¹¹ The SINGA imposes (i) an overall gross borrowing limit of S\$90 billion based on the expected pipeline of nationally significant infrastructure projects from 2021 to 2036, and (ii) an annual effective interest cost threshold of S\$5 billion to prevent excessive interest payments.

¹² The Singapore Green Bond Framework and the SPO can be found at: <https://go.gov.sg/greenbonds>.





¹³ Published by the Monetary Authority of Singapore in December 2023, the SAT sets out detailed thresholds and criteria for defining green and transition activities that contribute to climate change mitigation. More information about the SAT can be found at: <https://www.mas.gov.sg/development/sustainable-finance/taxonomy>.

¹⁴ Statutory Boards will issue their own green bond frameworks to demonstrate how their respective frameworks are aligned with international guidelines and market best practices. Refer to the footnotes in Table 1 for the frameworks of the Statutory Boards that have issued green bonds. The Land Transport Authority (“LTA”) published its Green Bond Framework in July 2024 and can be found at: https://www.lta.gov.sg/content/ltagov/en/who_we_are/statistics_and_publications/reports.html.

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Table 1: Singapore Public Sector Green Bonds as of 31 March 2024

Issuer	Issuance (S\$ billion)	Green Category	
Singapore Government/ Monetary Authority of Singapore ("MAS") ^[a]	5.2	Clean Transportation	
National Environment Agency ("NEA") ^[b]	1.7	Waste Management	
Housing & Development Board ("HDB") ^[c]	4.8	Green Buildings	
Public Utilities Board ("PUB") ^[d]	0.8	Sustainable Water and Wastewater Management	
Total	12.5		

^[a] As the agent of the Singapore Government, MAS is empowered by the Government Securities (Debt Market and Investment) Act and the SINGA to undertake the issuance and management of securities on behalf of the Government.

^[b] NEA's Green Bond Framework and relevant materials can be found at: <https://www.nea.gov.sg/corporate-functions/resources/medium-term-note-programme>.

^[c] HDB's Green Finance Framework and relevant materials can be found at: <https://www.hdb.gov.sg/about-us/news-and-publications/green-finance-framework-and-reports>.

^[d] PUB's Green Financing Framework and relevant materials can be found at: <https://www.pub.gov.sg/public/waterloop/sustainability/green-financing-framework>.

These public sector green bond issuances will spur the development of a high-quality green bond market in Singapore by serving as a reference for the corporate green bond market, deepening market liquidity for green bonds, and attracting green issuers, capital, and investors.

For the avoidance of doubt, the allocation and impact reports in the following sections will only include the Green SGS (Infrastructure) bonds issued by the Government, and do not include green bonds issued by the Statutory Boards. The Statutory Boards will publish their green bond reports in accordance with their respective frameworks, and relevant details can be found on their websites.

4 ALLOCATION REPORT

An aerial photograph of a modern cityscape. In the foreground, a multi-level elevated train system with multiple tracks curves across a lush green lawn. Several palm trees and other tropical plants are scattered throughout the green space. In the background, a dense urban area is visible, featuring several tall skyscrapers, including a prominent one with a blue-tinted facade. The sky is filled with large, white, fluffy clouds, with patches of blue sky visible.

4. Allocation Report

The Government issued one tranche of Green SGS (Infrastructure) bond in the Reporting Period, which was the re-opening of the inaugural 50-year Green SGS (Infrastructure) bond (Table 2). The issuance saw strong market demand, with an overall subscription rate of 1.4 times that allowed the Government to issue at the top-end of the targeted size range.

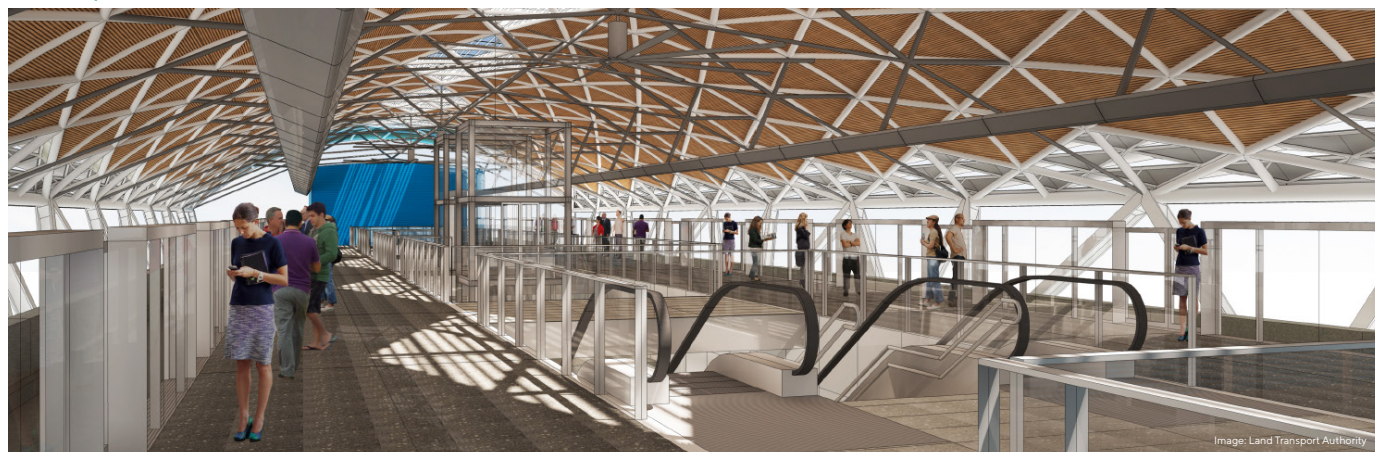
Table 2: Details of Green SGS (Infrastructure) Bonds Issued

ISIN	Original Tenor	Coupon	Issue Date	Principal Amount	Maturity Date
SGXF47639806	50 years	3.00%	15 August 2022 ¹⁵ (Inaugural tranche)	\$S2,400,000,000	1 August 2072
			4 September 2023 (Re-opened tranche)	\$S2,800,000,000	

Both the inaugural and re-opened tranches were fully earmarked for the JRL and CRL. These projects were approved by the Green Bond Steering Committee (“GBSC”) set up by the Ministry of Finance (“MOF”), as Eligible Green Expenditures under the “Clean Transportation” Use of Proceeds category in FY2022.¹⁶

The land transport sector today accounts for about 15% of carbon emissions in Singapore. One key strategy to reduce carbon footprint in this sector is encouraging greener commutes, among other initiatives such as vehicle electrification and greening infrastructure and operations. Expanding our public transport infrastructure and electric rail network is a core element of this strategy, and these projects are aligned with the Land Transport Master Plan 2040.

Artist impression of JRL JE4 station



¹⁵ Issued in FY2022 and reported in the Singapore Green Bond Report for FY2022.

¹⁶ The GBSC is chaired by the Second Minister for Finance, to oversee and approve key decisions related to the green bonds issued under the Singapore Green Bond Framework. The GBSC currently comprises of senior government representatives from MOF, MAS, Accountant-General’s Department, Ministry of Sustainability and the Environment and Ministry of Transport, and is supported by the Green Bonds Programme Office under MOF.

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The development of JRL and CRL will support the “Sustainable Living” pillar of the Green Plan, which targets to expand our rail network to 360km, and achieve 75% mass public transport peak modal share, up from the current share of 64%.¹⁷ The development of JRL and CRL is a key enabler to achieve the ambitious goal of significantly reducing land transport emissions in absolute terms, in line with Singapore’s net zero target by 2050.

Capital expenditures on the JRL and CRL projects are expected to continue to meet the green eligibility criteria for the transport sector, even after we align the Singapore Green Bond Framework with the SAT.

As at 31 March 2024, 100% of inaugural tranche (or S\$2.4 billion) and 14% of the re-opened tranche proceeds (or S\$0.4 billion) have been allocated to current Eligible Green Expenditures (Table 3).¹⁸

Table 3: Allocation of Green SGS (Infrastructure) Bonds

Green Category	Environmental Objective	Green Plan Pillar	Eligible Green Expenditures	Green SGS (Infrastructure) Bonds	Allocation in FY2022 (S\$)	Allocation in FY2023 (Reporting Period) (S\$) ¹⁹	Total allocation as at 31 March 2024 (S\$)
Clean Transportation	Climate Change Mitigation	Sustainable Living	Passenger Electric Rail	Inaugural tranche	708,656,367	1,691,343,633	2,400,000,000
				Re-opened tranche	Not applicable	396,961,276	396,961,276
				Total Allocation	708,656,367	2,088,304,909	2,796,961,276

The unallocated green bond proceeds of the re-opened tranche totalling S\$2.4 billion as at 31 March 2024, were either (i) temporarily held in a separate cash account maintained with MAS which is ring-fenced for Eligible Green Expenditures, or (ii) invested by the Accountant-General’s Department in short-term liquidity instruments (i.e. fixed deposits) in accordance with the framework. These unallocated green bond proceeds are expected to be fully allocated to the JRL and CRL by the end of FY2025.

Artist impression of CRL1 Loyang station



The Ministry of Transport (“MOT”) and the Land Transport Authority (“LTA”) are responsible for the implementation and monitoring of the JRL and CRL projects, and informing the GBSC of any potential non-compliance with the eligibility criteria and Environmental, Social, and Governance (“ESG”) controversies. There were no non-compliance and ESG controversies noted during the Reporting Period.

¹⁷ The “Sustainable Living” pillar of the Green Plan seeks to make reducing carbon emissions, keeping our environment clean, and saving resources and energy a way of life in Singapore. The expansion of electric rail network comes under the sub-pillar “Green Commutes”.

¹⁸ The green bond proceeds were allocated on a First-in, First-out basis.

¹⁹ PricewaterhouseCoopers LLP has undertaken a limited assurance engagement on the allocation of proceeds for the financial year ended 31 March 2024 raised through the issuance of the Green SGS (Infrastructure) bonds. The assurance report can be found in Section 6 of this report.

5

IMPACT REPORT




5. Impact Report

To assess the impact of Eligible Green Expenditures, we have taken reference from ICMA's Harmonised Framework for Impact Reporting (June 2024) handbook. As the construction of the JRL and CRL projects are still ongoing as of the end of the Reporting Period, this report includes the ex-ante (expected) impact figures of these Eligible Green Expenditures on a portfolio basis (Table 4).

Per the approach adopted in the inaugural impact report, we have focused on the environmental impact (i.e. avoidance of GHG emissions and air pollutants), as well as other performance indicators relating to the JRL and CRL projects. In case of material changes, updates on ex-post (actual) impact figures will be provided when the JRL and CRL become operational in future years.

While it is not possible to attribute the number of jobs created to specific rail lines, the upcoming expansion of the rail network is expected to create about 800 jobs. MOT and LTA will use the Rail Manpower Development Package ("RMDP") to equip and prepare workers for the future rail network that will be larger and more complex.²⁰

Table 4: Impact indicators

Portfolio		Clean Transportation
Allocated Amount	S\$	2,796,961,276
Project lifetime	years	99
Project Emissions Avoided	tCO ₂ e/year	99,906 - 122,107
Financed Emissions Avoided	tCO ₂ e/year	4,737 - 7,076
Emissions Avoided per S\$ Million Allocated	tCO ₂ e/year/ S\$'million	1.7 - 2.5
Relative Emissions Avoided	%	81
Project Air Pollutants Reduced	kg/year	SO _x : 20,494 - 25,049 NO _x : 26,132 - 31,939 PM ₁₀ : 1,311 - 1,602 PM _{2.5} : 940 - 1,149
Financed Air Pollutants Reduced	kg/year	SO _x : 972 - 1,452 NO _x : 1,239 - 1,851 PM ₁₀ : 62 - 93 PM _{2.5} : 45 - 67
Passenger-kilometers Travelled	million pkm/year	2,207 - 2,697
Length of Rail	km	74
Contribution to SDG		 11 SUSTAINABLE CITIES AND COMMUNITIES

²⁰ The S\$100 million RMDP was launched in 2019 to support and accelerate rail workforce transformation. More information about the RMDP can be found at: https://www.lta.gov.sg/content/ltagov/en/industry_innovations/industry_transformation_map/rail_manpower_development_package.html.

5.1 Impact Methodology²¹

We commissioned Morningstar Sustainalytics, an ESG research, ratings and analytics firm, to independently develop a methodology to quantify the green bond impact relating to the JRL and CRL projects. The methodology was developed by leveraging best-in-class methodologies, protocols, and frameworks.²²

A key output of the impact methodology is “emissions avoided”, which refers to the reduction of GHG emissions over the operational lifetime of the JRL and CRL between a baseline (i.e. counterfactual) scenario in which the projects do not exist, compared to the project scenario in which the JRL and CRL become operational and displace a mix of existing and future transportations (including private vehicles, trains, taxis, buses, and active mobility) along the same travel distance. The calculations account for predicted shifts in grid emission factors and local transportation fuel mixes.²³

The JRL and CRL projects are estimated to result in total carbon savings of more than 100,000 tonnes of CO₂-equivalent annually, which would be equivalent to taking at least 22,000 cars off Singapore’s roads.²⁴ This represents an estimated emissions reduction of 81% compared to the baseline scenario.

Financed GHG emissions avoided for the green bond portfolio is then calculated to be between 4,700 and 7,100 tonnes of CO₂-equivalent annually. The financed emissions avoided figures are divided by the amount of green bonds allocated (i.e. S\$2.8 billion as at 31 March 2024) to derive the avoided emissions intensity of between 1.7 and 2.5 tonnes of CO₂-equivalent avoided annually, per million Singapore dollar allocated.

MOF will provide annual updates on the estimated impact in our future green bond reports. We will continually refine our impact methodology, in line with international standards and best practices.

²¹ For more details of the impact methodology, please refer to the Singapore Green Bond Report for FY2022 at <https://go.gov.sg/greenbonds>.

²² These include the GHG Protocol, International Financial Institutions Guideline for a Harmonised Approach to GHG Accounting, Partnership for Carbon Accounting Financials’ Global GHG Accounting Standard, and the United Nation’s Clean Development Mechanism.

²³ The calculations for “air pollutants reduced” follow a similar approach.

²⁴ MOF’s estimate based on the United States Environmental Protection Agency (EPA)’s assumption that an average passenger car emits about 4.6 tonnes of CO₂-equivalent per year. EPA’s figure is likely to be slightly higher compared to the emission factor in Singapore’s context.

6

EXTERNAL REVIEW





INDEPENDENT PRACTITIONER’S LIMITED ASSURANCE REPORT ON THE ALLOCATION OF PROCEEDS FOR THE FINANCIAL YEAR ENDED 31 MARCH 2024 RAISED THROUGH THE ISSUANCE OF THE GREEN SINGAPORE GOVERNMENT SECURITIES (INFRASTRUCTURE) BONDS AS SET OUT IN THE SINGAPORE GREEN BOND REPORT

To the Ministry of Finance-Ministry Headquarter

We have been engaged by Ministry of Finance-Ministry Headquarter (“MOF”) to undertake a limited assurance engagement in respect of the allocation of proceeds for the financial year ended 31 March 2024 raised through the issuance of the Green Singapore Government Securities (Infrastructure) bonds as set out on page 4 and page 13 of the Singapore Green Bond Report (“the Selected Information”).

Our assurance engagement was with respect to the Selected Information for the financial year ended 31 March 2024. We have not performed any procedures with respect to (i) earlier periods and (ii) any other elements included in the Singapore Green Bond Report, and in the website and other publications, and therefore do not express any conclusion thereon.

Reporting Criteria

The Selected Information has been prepared in accordance with the Singapore Green Bond Framework¹ (“the Framework”).

Management’s Responsibility

Management of MOF is responsible for establishing the Framework and for the preparation of the Selected Information in accordance with the Framework. The responsibility includes designing, implementing and maintaining internal controls relevant to the preparation of the Selected Information that is free from material misstatement, whether due to fraud or error.

Practitioner’s Independence and Quality Management

We have complied with the independence and other ethical requirements of the Accounting and Corporate Regulatory Authority (ACRA) Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities (ACRA Code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies Singapore Standard on Quality Management 1 which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

¹ The Singapore Green Bond Framework (June 2022) can be found on the MOF website at: <https://www.mof.gov.sg/policies/fiscal/greenbonds>



Practitioner's Responsibility

Our responsibility is to express a limited assurance conclusion on the Selected Information based on the procedures we have performed and the evidence we have obtained. We performed our limited assurance engagement in accordance with Singapore Standard on Assurance Engagements 3000 (Revised) – Assurance Engagements other than Audits or Reviews of Historical Financial Information (“Standard”). This Standard requires that we plan and perform our work to form the conclusion about whether the Selected Information is free from material misstatement. The extent of our procedures depends on our professional judgment and our assessment of the engagement risk.

A limited assurance engagement involves assessing the suitability in the circumstances of MOF’s use of the Framework as the basis for the preparation of the Selected Information, assessing the risks of material misstatement of the Selected Information whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the Selected Information. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

The procedures selected included inquiries, observation of processes performed, inspection of documents and agreeing or reconciling with underlying records. Given the circumstances of the engagement, we also performed the following:

- interviewed management and personnel in relation to the Selected Information;
- obtained an understanding of how the Selected Information is gathered, collated and aggregated internally;
- performed limited substantive testing, on a selective basis, of the Selected Information to check that data had been appropriately measured, recorded, collated and reported, to the extent we considered necessary and appropriate to provide sufficient evidence for our conclusion; and
- considered the disclosure and presentation of the Selected Information.

The 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. Accordingly, we do not express a reasonable assurance opinion about whether the Selected Information has been prepared, in all material respects, in accordance with the Framework.

Inherent Limitations

In designing these procedures, we considered the system of internal controls in relation to the Selected Information and reliance has been placed on internal controls where appropriate. Because of the inherent limitations in any accounting and internal control system, errors and irregularities may nevertheless occur and not be detected.

Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Selected Information for the financial year ended 31 March 2024 is not prepared, in all material respects, in accordance with the Framework.



Purpose and Restriction on Distribution and Use

Without modifying our conclusion, we draw attention to the fact that the Selected Information was prepared for inclusion in the Singapore Green Bond Report by the management of MOF as required by the Framework ("Purpose"). As a result, the Selected Information may not be suitable for another purpose.

Our report is intended solely for the Purpose set forth in the paragraph above and should not be used for any other purpose. Save for the disclosure of our report in the Singapore Green Bond Report and on MOF's website, neither this report nor its contents or any part thereof may be distributed to, discussed with or otherwise disclosed to any third party without our prior written consent. MOF is responsible for all other information other than our report, in the Singapore Green Bond Report and our report does not cover this other information, and we do not express any form of assurance conclusion thereon. To the fullest extent permitted by law, we do not accept any liability or assume any responsibility to anyone else other than MOF for our work or this report. Any reliance placed on this report by any third party is entirely at its own risk. MOF is responsible for its website and that we do not accept responsibility for any changes that may have occurred to the Selected Information or Framework since the publication of our report in the Singapore Green Bond Report.

Yours faithfully

PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Public Accountants and Chartered Accountants
Singapore
24 September 2024