Impact Report for Bonds

TLT Green Financing Framework

SUSTAINALYTICS
a Morningstar company
IMPACT REPORTING

Impact Summary

Evaluation Date March 21, 2022

Issuer Location Bangkok, Thailand

Sustainalytics has calculated the estimated impact achieved by the green bonds Toyota Leasing (Thailand) Co., Ltd. issued in April 2021 and February 2022. Projects in the category Clean Transportation across Thailand were allocated THB 4 billion. For a representative year of the bond tenure, Sustainalytics has calculated 8,853 tonnes of avoided emissions in CO_2e.

THB 4B
Allocated funds

8,853
Annual emissions avoided (tCO_2e)

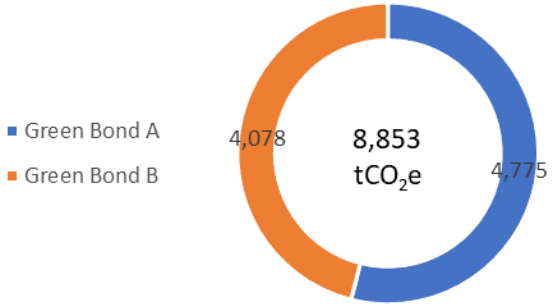
2
Bonds

2
Wind turbines running for one year

1
Country

584K
Trees, yearly sequestration

Avoided CO_2e emissions



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Introduction

Toyota Leasing (Thailand) Co., Ltd. ("TLT") is an indirect majority-owned subsidiary of Toyota Motor Corporation. TLT operates as an auto financing company offering hire purchase, financial lease, operating lease and vehicle registration to Toyota, Lexus, Hino and Suzuki customers in Thailand. In 2021 and 2022, TLT issued green bonds and allocated the proceeds according to the TLT Green Financing Framework. Sustainalytics provided a Second-Party Opinion on the Green Financing Framework proposed by TLT, evaluating it as credible, impactful and aligned with the Green Bond Principles 2018 and the Green Loan Principles 2021.[1,2]

TLT engaged Sustainalytics to quantify the environmental benefits of the projects refinanced with the proceeds from TLT's green bonds. Using established methodologies, Sustainalytics has estimated avoided emissions from TLT's hybrid vehicle leases. This report presents the details of our findings, including a description of the methodology used to calculate the impacts.

Scope of Work and Limitations

TLT has engaged Sustainalytics to calculate the environmental impacts of the projects refinanced through the green bonds. For this work, Sustainalytics relied on information provided by TLT on the amounts allocated and the technical data on the projects financed.

Sustainalytics' impact reporting is aligned with ICMA's Harmonised Framework for Impact Reporting handbook of June 2021.[3] The methodology and assumptions made for the impact calculation are outlined in the methodology chapter.

As part of this engagement, Sustainalytics exchanged information with various members of TLT's management team to understand the sustainability impact of its projects. Through these exchanges, TLT's representatives have confirmed that:

(1) They understand it is the sole responsibility of TLT to ensure that the information provided is complete, accurate and up to date;

(2) They have provided Sustainalytics with all relevant information;

(3) Any provided material information has been duly disclosed in a timely manner.

Sustainalytics also reviewed relevant public documents and non-public information.

[1] The Green Bond Principles are administered by the International Capital Market Association and are available at https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Green-Bonds-Principles-June-2018-270520.pdf.
[2] The Green Loan Principles are administered by the Loan Market Association, Asia Pacific Loan Market Association and Loan Syndications and Trading Association and are available at https://www.lsta.org/content/green-loan-principles/.
[3] ICMA, Harmonised Framework for Impact Reporting, (2021), at: https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Handbook-Harmonised-Framework-for-Impact-Reporting-June-2021-100621.pdf

Impact Findings

For reporting, Sustainalytics follows ICMA's Harmonised Framework for Impact Reporting.[4] This framework synthesizes market expectations and outlines recommendations for impact reporting to create a standardized reporting structure and to enhance the understanding of the impact for all stakeholders, including bond investors.

Table 1 below provides a summary of the projects whose impacts Sustainalytics has calculated at the portfolio level. Table 2 shows impacts calculated for each bond. Avoided emissions per vehicle model can be found in the Appendix. The metrics represent a year in the project lifetime, which in this case is the lease tenure.

Table 1: Summary of Impact - Portfolio Level[5]

Allocated Amount	Weighted Average Project Lifetime	Passenger-kilometres travelled	Financed Annual Emissions Avoided
THB	*Years*	*pkm*	*tCO_2e*
4,000,572,539	4.10	203,469,723	8,853

Table 2: Impact of Clean Transportation Projects per bond

Bond	Allocated Amount	Number of Vehicles Deployed	Passenger-kilometres travelled	Annual Emissions Avoided
	THB		*pkm*	*tCO_2e*
Green Bond A	2,000,099,220	3,636	116,911,491	4,775
Green Bond B	2,000,473,319	2,692	86,558,232	4,078

[4] ICMA, Harmonised Framework for Impact Reporting, at: https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Handbook-Harmonised-Framework-for-Impact-Reporting-June-2021-100621.pdf

[5] Table 1 and Table 2 summarizes amounts by loan and portfolio that have been rounded for each car model (see appendix)

Methodology

Sustainalytics developed its own methodologies for quantifying GHG avoidance and other metrics, including leveraging publicly available best-in-class methodologies, protocols and frameworks that are currently industry best practice. Our estimation practices and general principles rely on the GHG Protocol.[6] Our methodologies are based on guidance provided by the International Financial Institutions'[7] Approach to GHG Accounting[8], notably on calculation methodology and global emissions. In addition, we rely on the Partnership for Carbon Accounting Financials' Global Accounting Standard[9] for guidance on estimation where data is not readily available and assumptions must be made. Finally, the UN Clean Development Mechanism[10] provides guidance and information, serving as the foundation for these and other methodologies, including those implemented in this report.

Clean Transportation

Clean transportation is assumed to displace a mix of existing and future transportation along the same travel distance. The carbon avoidance is then calculated using:

a) The emissions of the clean transportation projects based on the best available data from TLT. To the extent available, calculations are based on fuel consumption or passenger-kilometre data. In the absence of such information, estimates are made based on mode of transportation, fuel type and average passengers per vehicle.

b) The baseline emissions, which are the emissions associated with a basket of vehicles or modes of transport being replaced currently and in the future lifetime of the project.

Data Sources and Assumptions

- For the projects included in this report, data on the mode of transportation, such as vehicle type and number of vehicles was provided by TLT.
- The average passenger-kilometres travelled were calculated using country averages for number of passengers and kilometres travelled per vehicle.[11]
- To calculate the emissions avoided, Sustainalytics uses well-to-wheel emission factors to account not only for emissions directly emitted by the vehicle, but also from the production and transportation of the fuels themselves. For the avoided emissions the project and baseline extra emissions often cancel each other out, but it has a significant impact on the financed emissions.
- Emission factors for transport modes sourced from credible sources for greenhouse gas reporting.[12]

[6] The Greenhouse Gas Protocol provides standards, guidance, tools and training for business and government to measure and manage climate-warming emissions. For more information: https://ghgprotocol.org/.
[7] Close to 25 institutions are currently members of the IFI Technical Working Group on Greenhouse Gas Accounting, including multilateral development banks such as the Asian Development Bank, African Development Bank, European Bank for Reconstruction and Development, European Investment Bank, Inter-American Development Bank, and the World Bank Group.
[8] The IFI Approach to GHG Accounting for Renewable Energy is in accordance with the Harmonised Approach to Greenhouse Gas Accounting. The IFI Technical Working Group on Greenhouse Gas Accounting has agreed to a common methodology and a set of emissions factors for GHG accounting of electricity production from renewable energy projects.
[9] PCAF is a group of leading international financial institutions that launched a global initiative to develop a global GHG accounting standard and make GHG accounting common practice in the financial industry. For more information: https://carbonaccountingfinancials.com/.
[10] UNFCCC, CDM Methodology Booklet, at: https://cdm.unfccc.int/methodologies/documentation/index.html
[11] Economic Research Institute for ASEAN and East Asia, "Energy Saving Potential Study on Thailand's Road Sector", (2015), at: https://www.eria.org/RPR_FY2015_No.5_Annex_1.pdf.
[12] Government of the UK, Department for Business, Energy & Industrial Strategy, "Government conversion factors for company reporting of greenhouse gas emissions", (2021), at: https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting

Appendix 1: Impacts of Clean Transportation by Project

Table 3: Impact per Car Model – Green Bond A

Project Name	Country	Allocated Amount	Share of total project financing	Project Lifetime	Number of Vehicles Deployed	Passenger-kilometres travelled	Annual Emissions	Annual Emissions Avoided
		THB	*%*	*Years*		*pkm*	*tCO_2e*	*tCO_2e*
C-HR HV Hi	Thailand	333,880,609	100	3.40	625	20,096,172	1,530	706
C-HR HV Mid	Thailand	214,101,062	100	3.70	420	13,504,628	1,028	475
Corolla Altis HV Entry	Thailand	57,124,563	100	4.00	121	3,890,619	308	166
Corolla Altis HV High	Thailand	586,227,107	100	3.50	1,113	35,787,263	2,835	1,528
Corolla Altis HV Mid	Thailand	196,617,336	100	3.70	402	12,925,858	1,024	552
Corolla Cross Hybrid Premium	Thailand	272,404,564	100	4.20	444	14,276,321	1,114	627
Corolla Cross Hybrid Premium Safety	Thailand	327,356,927	100	4.00	488	15,691,091	1,224	689
Corolla Cross Hybrid Smart	Thailand	12,387,052	100	4.50	23	739,539	58	32

Table 4: Impact per Car Model – Green Bond B

Project Name	Country	Allocated Amount	Share of total project financing	Project Lifetime	Number of Vehicles Deployed	Passenger-kilometres travelled	Annual Emissions	Annual Emissions Avoided
		THB	*%*	*Years*		*pkm*	*tCO_2e*	*tCO_2e*
Camry 2.5HV	Thailand	377,684,762	100	3.70	412	13,247,397	1,065	927
C-HR HV Hi	Thailand	27,465,856	100	4.83	39	1,254,001	95	44
C-HR HV Mid	Thailand	29,180,679	100	5.56	42	1,350,463	103	47
C-HR HV Premium Safety	Thailand	106,996,638	100	4.71	151	4,855,235	370	171
Corolla Altis HV Entry	Thailand	6,276,274	100	5.09	10	321,539	25	14
Corolla Altis HV High	Thailand	48,784,049	100	4.44	77	2,475,848	196	106
Corolla Altis HV Mid	Thailand	7,166,306	100	5.37	10	321,539	25	14
Corolla Altis HV Premium	Thailand	28,978,265	100	4.69	47	1,511,232	120	65
Corolla Altis HV Premium Safety	Thailand	5,370,226	100	5.04	7	225,077	18	10
Corolla Altis HV Smart	Thailand	1,041,978	100	3.44	2	64,308	5	3
Corolla Cross Hybrid Premium	Thailand	635,575,273	100	4.85	939	30,192,489	2,355	1,326
Corolla Cross Hybrid Premium Safety	Thailand	658,165,299	100	4.71	855	27,491,563	2,144	1,208
Corolla Cross Hybrid Smart	Thailand	67,787,714	100	5.41	101	3,247,541	253	143

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