Impact Report for Loans

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 loans Toyota Leasing (Thailand) Co., Ltd. Issued in December 2021 and January 2022. Projects in the category Clean Transportation across Thailand were allocated THB 6 billion. For a representative year of the loan tenure, Sustainalytics has calculated 13,591 tonnes of avoided emissions in CO_2e.

THB 6B
Allocated funds

13,591
Annual emissions avoided (tCO_2e)

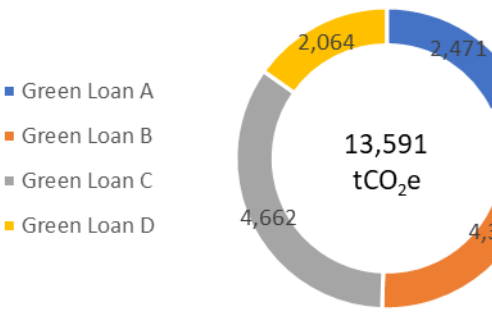
4
Loans

3
Wind turbines running for one year

1
Country

897K
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 loans 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 loans. 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 loans. For this work, Sustainalytics relied on information data 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 loan. Avoided emissions per vehicle model can be found in the Appendix. These 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*
6,001,697,628	4.13	307,133,812	13,591

Table 2: Impact of Clean Transportation Projects per Loan

Loan	Allocated Amount	Number of Vehicles Deployed	Passenger-kilometres travelled	Annual Emissions Avoided
	THB		*pkm*	*tCO_2e*
Green Loan A	1,000,165,173	1,697	54,565,126	2,471
Green Loan B	2,000,768,366	3,102	99,741,319	4,394
Green Loan C	2,000,228,051	3,287	105,689,787	4,662
Green Loan D	1,000,536,038	1,466	47,137,580	2,064

[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 transportations 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 Loan 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*
Camry 2.5HV	Thailand	88,666,384	100	3.26	119	3,826,311	308	268
C-HR HV Hi	Thailand	31,061,663	100	4.34	44	1,414,771	108	50
C-HR HV Mid	Thailand	20,878,176	100	4.54	32	1,028,924	78	36
Corolla Altis HV Entry	Thailand	8,607,920	100	3.92	15	482,308	38	21
Corolla Altis HV High	Thailand	50,118,996	100	4.13	77	2,475,848	196	106
Corolla Altis HV Mid	Thailand	24,225,439	100	4.08	44	1,414,771	112	60
Corolla Cross Hybrid Premium	Thailand	330,373,807	100	4.00	603	19,388,787	1,512	852
Corolla Cross Hybrid Premium Safety	Thailand	431,714,464	100	3.63	734	23,600,944	1,841	1,037
Corolla Cross Hybrid Smart	Thailand	14,518,324	100	3.55	29	932,462	73	41

Table 4: Impact per Car Model – Green Loan 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	54,731,674	100	3.90	61	1,961,386	158	137
C-HR HV Hi	Thailand	44,891,042	100	4.30	67	2,154,310	164	76
C-HR HV Mid	Thailand	23,505,808	100	4.58	38	1,221,847	93	43
Corolla Altis HV Entry	Thailand	7,821,243	100	3.66	16	514,462	41	22
Corolla Altis HV High	Thailand	69,898,293	100	4.22	114	3,665,542	290	157
Corolla Altis HV Mid	Thailand	4,548,840	100	4.88	7	225,077	18	10
Corolla Altis HV Premium	Thailand	60,531,099	100	4.01	110	3,536,926	280	151
Corolla Altis HV Premium Safety	Thailand	3,427,726	100	4.61	5	160,769	13	7
Corolla Altis HV Smart	Thailand	1,470,825	100	5.39	2	64,308	5	3
Corolla Cross Hybrid Premium	Thailand	689,351,667	100	4.35	1,126	36,205,263	2,824	1,590
Corolla Cross Hybrid Premium Safety	Thailand	956,720,326	100	4.15	1,421	45,690,656	3,564	2,007
Corolla Cross Hybrid Smart	Thailand	83,869,823	100	4.72	135	4,340,773	339	191

Table 5: Impact per Car Model – Green Loan C

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	48,243,559	100	3.71	55	1,768,463	142	124
C-HR HV Hi	Thailand	22,848,469	100	4.08	39	1,254,001	95	44
C-HR HV Mid	Thailand	20,799,349	100	4.61	32	1,028,924	78	36
Corolla Altis HV Entry	Thailand	12,784,189	100	4.24	23	739,539	59	32
Corolla Altis HV High	Thailand	65,783,700	100	4.05	114	3,665,542	290	157
Corolla Altis HV Mid	Thailand	23,534,438	100	4.50	40	1,286,155	102	55
Corolla Cross Hybrid Premium	Thailand	737,683,012	100	4.13	1,279	41,124,806	3,208	1,806
Corolla Cross Hybrid Premium Safety	Thailand	1,043,540,397	100	3.86	1,661	53,407,586	4,166	2,346
Corolla Cross Hybrid Smart	Thailand	25,010,938	100	4.19	44	1,414,771	110	62

Table 6: Impact per Car Model – Green Loan D

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	19,047,027	100	3.88	21	675,231	54	47
C-HR HV Hi	Thailand	18,893,574	100	4.86	27	868,155	66	31
C-HR HV Mid	Thailand	28,015,893	100	5.14	42	1,350,463	103	47
C-HR HV Premium Safety	Thailand	3,794,537	100	5.38	5	160,769	12	6
Corolla Altis HV Entry	Thailand	3,092,356	100	5.20	5	160,769	13	7
Corolla Altis HV High	Thailand	35,439,125	100	4.53	56	1,800,617	143	77
Corolla Altis HV Mid	Thailand	5,715,822	100	4.97	8	257,231	20	11
Corolla Altis HV Premium	Thailand	25,694,672	100	4.27	43	1,382,617	110	59
Corolla Altis HV Premium Safety	Thailand	3,269,334	100	4.54	5	160,769	13	7
Corolla Cross Hybrid Premium	Thailand	410,397,968	100	4.63	632	20,321,249	1,585	893
Corolla Cross Hybrid Premium Safety	Thailand	402,629,578	100	4.42	552	17,748,939	1,384	780
Corolla Cross Hybrid Smart	Thailand	44,546,152	100	4.88	70	2,250,771	176	99

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