

# TOYOTA MOTOR CREDIT CORPORATION GREEN BOND

## FRAMEWORK OVERVIEW AND SECOND OPINION BY SUSTAINALYTICS

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**Trisha Taneja (Toronto)**

Associate, Advisory Services

[trisha.taneja@sustainalytics.com](mailto:trisha.taneja@sustainalytics.com)

(+1) 647 317 3695

**Charlotte Peyraud (New York)**

Senior Advisor, Institutional Relations

[charlotte.peyraud@sustainalytics.com](mailto:charlotte.peyraud@sustainalytics.com)

(+1) 646 518 0184

**Larysa Metanchuk (Timisoara)**

Advisory Services, Advisory Services

[larysa.metanchuk@sustainalytics.com](mailto:larysa.metanchuk@sustainalytics.com)

(+40) 356 089 978

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## 1. INTRODUCTION

Toyota Motor Credit Corporation (TMCC) has developed a green bond framework (the “TMCC Green Bond Framework”) under which it plans to issue a green bond (the “TMCC Green Bond”), the proceeds of which will be used to finance new retail loan and lease contracts for Toyota and Lexus vehicles that meet the eligibility criteria outlined in the framework. TMCC has engaged Sustainalytics to provide a second opinion on its framework and the framework’s environmental credentials. As part of this engagement, Sustainalytics held conversations with various members of TMCC’s management and sustainability teams to understand the environmental impact of their business processes and planned use of proceeds for the bond framework. Sustainalytics also reviewed relevant public and internal documents. This document contains two sections: Framework Overview – a summary of the TMCC Green Bond Framework; and Sustainalytics’ Opinion – an opinion on the framework.

## 2. OVERVIEW OF ISSUER

Toyota Motor Credit Corporation (“TMCC”), a California corporation, is an indirect wholly-owned subsidiary of Toyota Motor Corporation (“TMC”) and is marketed under the brands of Toyota Financial Services and Lexus Financial Services. TMCC provides a variety of finance and insurance products to authorised Toyota and Lexus dealers and their customers in the United States. TMC designs, manufactures, assembles, and sells passenger vehicles, minivans and commercial vehicles, and related parts and accessories through its subsidiaries and affiliated companies (TMC, together with its consolidated subsidiaries “Toyota”). Toyota operates in Japan, North America, Europe, Asia, Central and South America, Oceania, Africa, and the Middle East. TMC was founded in 1933 and is headquartered in Toyota City, Japan.

In its North American Environmental Report, Toyota acknowledges that it can play a role in transitioning the world towards a low-carbon future. Toyota states a commitment to reducing the carbon footprint of its products and operations, and outlines reducing the fuel consumption and greenhouse gas (GHG) emissions of its vehicles as a way to do so. Specifically, Toyota’s vehicle carbon strategy has four parts: (i) improving the fuel efficiency of gasoline vehicles, (ii) advancing the technology and mass acceptance of alternative powertrains, (iii) supporting development of the infrastructure needed for full-scale commercialization of advanced technology vehicles that run on alternative fuels, and (iv) complying with vehicle fuel economy and GHG regulations and meeting internal targets. Toyota describes hybrid vehicles as an important way to advance its vehicle low-carbon strategy.<sup>1</sup> Notably, in 2016, three Toyota vehicles were named on the American Council for an Energy Efficient Economy (ACEEE) “Greenest Vehicles of 2016” list: Toyota Prius, Toyota Prius C and Toyota Prius Two Eco. The list considers not only car emissions to air during use, but also emissions from the electric grid that feed such cars and the energy used to manufacture and dispose of them.

To support the sales of low-carbon vehicles and contribute to Toyota’s vehicle carbon strategy, TMCC plans to issue its fourth green bond. TMCC has previously issued asset-backed green bonds in 2014, 2015, and 2016.

<sup>1</sup> <http://www.toyota.com/usa/environmentreport2016/carbon.html>

## 3 FRAMEWORK OVERVIEW

For the purpose of issuing the TMCC Green Bond, TMCC has developed the following framework, which addresses the four key pillars of the Green Bond Principles (“GBP”): use of proceeds, project selection process, management of proceeds, and reporting.

### 3.1 Use of Proceeds

The net proceeds of the TMCC Green Bond will be allocated towards financing new retail loan and lease contracts originated by TMCC for Toyota and Lexus vehicle models that meet all three of the eligibility criteria below:

#### Eligibility Criteria

- (i) Vehicles that are gas-electric hybrids or alternative-fuel powertrain vehicles;
- (ii) Vehicles that have a minimum highway and city miles per gallon (MPG or MPG equivalent) of 35; and
- (iii) Vehicles that have a United States Environmental Protection Agency (“EPA”) Smog Rating of 8 or better (where 10 is the cleanest), as determined by the EPA for the purchase of a vehicle in California.

### 3.2 Project Evaluation and Selection Process

#### Application of Eligibility Criteria in Project Selection

Eligible models are selected by TMCC’s Treasury team based on the eligibility criteria above. Once the eligible models have been determined, TMCC uses automated reports to identify all retail finance and lease contracts for which the underlying assets are eligible models. Only new contracts for which the underlying asset is an eligible model are funded with the TMCC Green Bond proceeds.

#### Environmental Sustainability Objectives

Toyota’s vehicle carbon strategy has four parts:

- (i) Improving the fuel efficiency of gasoline vehicles,
- (ii) Advancing the technology and mass acceptance of alternative powertrains,
- (iii) Supporting development of the infrastructure needed for full-scale commercialization of advanced technology vehicles that run on alternative fuels, and
- (iv) Complying with vehicle fuel economy and GHG regulations and meeting internal targets.

Toyota states that hybrid vehicles are an important way to advance its vehicle low-carbon strategy.

#### Process to Mitigate Environmental and Social Risks Stemming from Eligible Projects

Toyota has in place a process to mitigate the environmental risks stemming from the use of batteries in electric or hybrid vehicles. Toyota has built its own recovery network to collect end-of-life hybrid vehicle (HV) batteries to be recycled. The batteries are recycled or remanufactured/reused as replacement batteries or as stationary storage batteries in renewable power generation systems.

### 3.3 Management of Proceeds

The net proceeds to TMCC from the TMCC Green Bond will initially be deposited by TMCC into one or more segregated accounts, which will be managed by TMCC's Treasury team. Pending allocation, proceeds will be invested in money market instruments until applied to new originations of eligible models. The proceeds will be allocated as new loans and leases for the eligible models are originated. No proceeds will be used to refinance existing loans or leases that were originated prior to the settlement of the TMCC Green Bond. The time required for full allocation of proceeds will depend largely on the sales rate of eligible models and TMCC's financing market share of those sales. As an example, proceeds for TMCC's previous three issuances of green bonds were fully allocated within three to five months of the close of the transactions.

### 3.4 Reporting

#### Allocation Reporting

TMCC will prepare a monthly TMCC Green Bond Use of Proceeds report certifying:

- the dollar amount of both leases and loans of eligible models originated by eligible vehicle type,
- the amount of any remaining unused proceeds in the segregated account(s), and
- that the proceeds have been used in accordance with the Use of Proceeds section of the framework, as set out on page [4] of this Second Opinion.

TMCC intends to engage a firm of independent accountants to perform agreed upon procedures with respect to the amounts reported. The monthly Use of Proceeds report showing the allocation of the TMCC Green Bond proceeds will be posted on TMCC's Investor Relations website:

[https://www.toyotafinancial.com/pub/w/investor\\_relation](https://www.toyotafinancial.com/pub/w/investor_relation)

#### Impact Reporting

Toyota's practice is to report on the impact created by its entire hybrid car portfolio. For example, in Toyota's environmental report,<sup>2</sup> Toyota discloses that it has sold more than 10 million hybrid vehicles worldwide as of January 2017, resulting in approximately 77 million fewer tons of CO<sub>2</sub> emissions, and saving nearly 8 billion gallons of gasoline.

However, this number is relevant for all Toyota hybrid models, not the subset of eligible models identified in Appendix 1.

TMCC has disclosed to Sustainalytics that it does not have an internal process in place to quantify the impact specifically of the hybrid models eligible for funding through the TMCC Green Bond. However, TMCC has indicated to Sustainalytics a willingness to engage with investors that require transaction-level impact reporting to help them develop a methodology to estimate relevant environmental impact metrics specifically for the vehicles that will be funded through the TMCC Green Bond.

<sup>2</sup> <https://www.toyota.com/usa/environmentreport2016/carbon.html>

## 4 SUSTAINALYTICS' OPINION

### Section 1: Sustainalytics' opinion on the TMCC Green Bond Framework

Overall, Sustainalytics is of the opinion that the TMCC Green Bond Framework is credible and robust, and aligns with four pillars of the Green Bond Principles 2017. In addition, Sustainalytics views the following elements of the TMCC Green Bond Framework positively:

- The TMCC Green Bond Framework eligibility criteria surpass the low threshold for impact set by the U.S. EPA SmartWay certification, and are closer to the criteria for the SmartWay Elite certification, which represent the highest threshold for impact by green vehicles as per the U.S. EPA.
- In practice, all models to be funded by the TMCC Green Bond have a smog rating and MPG range that is higher than that set out by the Use of Proceeds eligibility criteria. In fact, the models that will be funded by the TMCC Green Bond are closer in range to the criteria set by the SmartWay Elite certification. Notably, Toyota Mirai, Prius, and Prius Prime are certified to SmartWay Elite standard for achieving the highest scores on both ratings.
- Management of proceeds under the TMCC Green Bond Framework is aligned with industry best-practice as the net proceeds from the TMCC Green Bond will initially be deposited by TMCC into one or more segregated accounts.
- Although TMCC has disclosed to Sustainalytics that its internal processes do not allow for transaction-level impact reporting, TMCC has indicated a willingness to work with investors that require such reporting to help them develop a methodology to estimate relevant environmental impact specifically for the vehicles that will be funded through the TMCC Green Bond.

#### ***Alignment of eligibility criteria with third-party definitions of green vehicles***

##### *U.S. EPA SmartWay Certification*

The U.S. EPA rates every new vehicle model sold in the U.S. on in-use GHG and smog-forming emissions annually. Vehicles that perform better than an average rated vehicle on both categories of ratings receive a SmartWay designation. Best-in-class vehicles, which receive the highest scores on both categories of ratings, receive a SmartWay Elite designation.

All models eligible for financing under the TMCC Green Bond Framework meet the U.S. EPA's SmartWay vehicles certification criteria,<sup>3</sup> indicating that their environmental performance is better than that of an average vehicle on GHG and smog-forming emissions.

Sustainalytics is of the opinion that the SmartWay certification by itself is a low threshold for meaningful impact, as it only indicates that a vehicle's performance on GHG and smog forming emissions is better than average. However, the eligibility criteria of the TMCC Green Bond Framework is more stringent than the SmartWay certification criteria, and several other Toyota and Lexus models that meet the U.S. EPA's SmartWay certification standards are not included as eligible models for this transaction.

<sup>3</sup> <https://www.epa.gov/greenvehicles/consider-smartway-vehicle>

Table 1 compares the criteria for the SmartWay and SmartWay Elite certifications with the eligibility criteria for the TMCC Green Bond Framework.

**Table 1: SmartWay, SmartWay Elite and TMCC Green Bond Framework Eligibility Criteria for Model Year (MY) 2017<sup>4</sup>**

	<b>SmartWay certification eligibility criteria (MY17)</b>	<b>TMCC Green Bond Framework eligibility criteria</b>	<b>SmartWay Elite certification eligibility criteria (MY 17)</b>
<b>GHG Rating (determined by MPG)</b>	29-32 MPG	Minimum 35 MPG	Minimum 44 MPG
<b>Smog Rating (where 10 is the highest)</b>	Minimum 5	Minimum 8	Minimum 9

As seen in Table 1, the TMCC Green Bond Framework eligibility criteria surpasses the low threshold for impact set by the SmartWay certification and is closer to the criteria for the SmartWay Elite certification, which represents the highest threshold for impact by green vehicles as per the U.S. EPA.

Additionally, all models chosen for funding through the TMCC Green Bond have an actual MPG and smog rating that is above the threshold set by the TMCC Green Bond Framework eligibility criteria (see Appendix 1). In practice, all models funded by the TMCC Green Bond are closer in range to the criteria set by the SmartWay Elite certification. Notably, Toyota Mirai, Prius, and Prius Prime are certified to SmartWay Elite standard for achieving the highest scores on both ratings.

*U.S. ACEEE green car rating – greenercars.org*

ACEEE greenercars.org rating evaluates GHG emissions and air pollutants during the vehicle life-cycle (embodied emissions from materials production, product manufacture and disposal) and fuel life-cycle (fuel supply cycle and in-use emissions). Similar to the EPA SmartWay certification, the ACEEE green car rating has two designations that highlight better-than-average cars (Above Average) and cars with superior performance (Superior).

All models eligible for financing under the TMCC Green Bond Framework received “Above Average” or “Superior” ratings based on the ACEEE green rating criteria,<sup>5</sup> indicating that those models have improved environmental performance compared to the industry average. Notably, Toyota Prius C and Prius V models were included in the ACEEE’s list of Greener cars, and Toyota Prius Prime and Toyota Prius C were included on the list of Greenest cars. Both lists single out models with better (Greener) and best (Greenest) environmental performance to guide consumers towards environmentally friendly choices.

Based on the above, Sustainalytics is of the opinion that the TMCC Green Bond Framework has set reasonable eligibility criteria and that the models funded will create meaningful environmental impact.

<sup>4</sup> <https://www.epa.gov/sites/production/files/2016-02/documents/420b16031.pdf>

<sup>5</sup> [http://greenercars.org/greenercars-ratings?shs\\_term\\_node\\_tid\\_depth=2464&field\\_class\\_tid=All&field\\_year\\_tid=All](http://greenercars.org/greenercars-ratings?shs_term_node_tid_depth=2464&field_class_tid=All&field_year_tid=All)

### **Alignment with Green Bond Principles 2017**

Sustainalytics has determined that TMCC Green Bond Framework aligns to the four pillars of the Green Bond Principles 2017. For detailed information please refer to Appendix 3: Green Bond/Green Bond Programme External Review Form.

## **Section 2: Sustainability Performance of the Issuer**

### **Contribution of proceeds to Toyota's vehicle carbon strategy**

The bond explicitly contributes to one of Toyota's strategic pillars: *advancing the technology and mass acceptance of alternative powertrains*. The relatively wide scope of eligibility criteria for proceeds use allows potential customers to choose from nine hybrid, plug-in hybrid and hydrogen-powered models offered in North America (see Annex 1), satisfying their needs for driving range, convenience and affordability. In fact, by enabling more consumers to afford cleaner vehicles, Toyota contributes to growth of consumer demand, ultimately leading to faster adoption of emerging technologies by the automotive and related industries. As of June 2016, the cumulative Toyota and Lexus hybrid sales in North America were over 2.8 million. With the TMCC Green Bond, Toyota plans to boost the diffusion of clean road transport in the U.S. market, maintaining its dominant position as a seller of hybrid vehicles in the U.S.<sup>6</sup>

In addition, the bond contributes to another strategic pillar: *complying with vehicle fuel economy and GHG regulations and meeting own internal targets*. Each of Toyota's vehicles eligible for financing under the use of proceeds (Annex 1) is included in the EPA's 2017 Green Vehicle Guide<sup>7</sup>; and achieves 2015 and 2021 EPA fuel economy standards. In fact, most of the eligible models are within 2015 standards set by the E.U., another major economy that has an impact on global trends and represents an attractive market for Toyota. Notably, the Toyota Mirai, a fuel cell model, exceeds all current and future targets set in both the US and the E.U., making it a vehicle with a long-term positive outlook for demand worldwide (pending infrastructure developments in any given area/country).

Toyota's eligibility criterion for fuel efficiency (35 MPG) surpasses its company-wide 2016 goal of average 33.1 MPG fuel efficiency,<sup>8</sup> demonstrating a clear commitment to expand its clean vehicles offering.

Overall, Sustainalytics is of opinion that the proceeds from the TMCC Green Bond will contribute to its vehicle carbon strategy, and that TMCC is well positioned to issue a green bond.

### **Addressing common environmental and social risks**

*Industry-wide risk of discrepancies between reported and delivered emission-reductions and fuel efficiency*

In general, the automotive industry faces increased scrutiny over the reliability of reported emission reductions gained through emerging technologies, as evidenced by the 2015 Volkswagen emissions

<sup>6</sup> [http://www.theicct.org/sites/default/files/publications/EU%20US%20PV%20Tech\\_working-paper\\_ICCT\\_27102016.pdf](http://www.theicct.org/sites/default/files/publications/EU%20US%20PV%20Tech_working-paper_ICCT_27102016.pdf)

<sup>7</sup> [http://www.fueleconomy.gov/feg/EPAGreenGuide/pdf/all\\_alpha\\_17.pdf](http://www.fueleconomy.gov/feg/EPAGreenGuide/pdf/all_alpha_17.pdf)

<sup>8</sup> <https://www.toyota.com/usa/environmentreport2016/carbon.html>

scandal. There is an industry-wide risk of potential discrepancies between the emission reduction results reported by carmakers and actual emission reduction results. For example, reports published by Transport and Environment, a European NGO campaigning for cleaner transport,<sup>9</sup> state that carmakers often manipulate lab tests to demonstrate lower emissions levels and higher fuel-efficiency levels, while real-world on-the-road emissions and fuel consumption differ from reported values. Such discrepancies can result in in-depth investigations initiated by regulators or civil society groups, and can also be a source of reputational risk for carmakers.

Specifically, with respect to Toyota, Transport and Environment's 2016 "Dieselgate" reports include Toyota in the list of carmakers whose diesel based car models in Europe have a discrepancy between reported and on the road emissions-reduction. However, Sustainalytics recognizes that these diesel-based car models are not proposed to be funded through the TMCC Green Bond.

Transport and Environment also publishes an annual 'Mind the Gap' report that analyses the discrepancy between emission reduction test results and real-world performance of various carmakers in Europe. In its 2015 and 2016 'Mind the Gap' reports, Transport and Environment identifies Toyota as having delivered on more than two-thirds (for 2014) and half (for 2015) of their claimed improvements with respect to emission reductions delivered on the road.<sup>10</sup> While this is still a discrepancy, these reports also single out Toyota as the only carmaker that would have achieved its targets in 2015 without exploiting emission reduction test flexibilities.<sup>11</sup>

The 'Mind the Gap' results speak more to Toyota's ability as a global carmaker to address the risks stemming from gaps in reported and delivered fuel-efficiency and emission reduction, rather than speaking to gaps found in specific models. TMCC has also informed Sustainalytics that Toyota complies with all emissions regulations in the U.S. and Europe, and conducts emission testing in accordance with the law.

Based on the above, Sustainalytics is of the opinion that Toyota is making an effort to mitigate the industry wide risk of gaps in reported and delivered emission-reductions and fuel-efficiency. However, industry best-practice is to conduct testing that is overseen by independent third parties and testing results are publicly disclosed. To be strongly positioned to mitigate this risk, Sustainalytics encourages Toyota to follow industry best-practice as described above.

#### *Battery disposal*

The EPA's study states that growth in adoption of vehicles that use batteries, such as electric or hybrid vehicles, will present an increased battery waste stream, which, if left ignored, will result in increased environmental pollution.<sup>12</sup> To mitigate the potential negative environmental impacts, the EPA

<sup>9</sup> [https://www.transportenvironment.org/sites/te/files/publications/2016\\_06\\_TE\\_briefing\\_Dirty\\_Thirty\\_FINAL.pdf](https://www.transportenvironment.org/sites/te/files/publications/2016_06_TE_briefing_Dirty_Thirty_FINAL.pdf);

[https://www.transportenvironment.org/sites/te/files/publications/2016\\_09\\_Dieselgate\\_report\\_who\\_what\\_how\\_FINAL\\_0.pdf](https://www.transportenvironment.org/sites/te/files/publications/2016_09_Dieselgate_report_who_what_how_FINAL_0.pdf)

<sup>10</sup> [https://www.transportenvironment.org/sites/te/files/publications/TE\\_Mind\\_the\\_Gap\\_2015\\_FINAL.pdf](https://www.transportenvironment.org/sites/te/files/publications/TE_Mind_the_Gap_2015_FINAL.pdf);

[https://www.transportenvironment.org/sites/te/files/publications/T%26E\\_Mind\\_the\\_Gap\\_2016%20FINAL\\_0.pdf](https://www.transportenvironment.org/sites/te/files/publications/T%26E_Mind_the_Gap_2016%20FINAL_0.pdf)

<sup>11</sup> [https://www.transportenvironment.org/sites/te/files/publications/TE\\_Mind\\_the\\_Gap\\_2015\\_FINAL.pdf](https://www.transportenvironment.org/sites/te/files/publications/TE_Mind_the_Gap_2015_FINAL.pdf);

[https://www.transportenvironment.org/sites/te/files/publications/T%26E\\_Mind\\_the\\_Gap\\_2016%20FINAL\\_0.pdf](https://www.transportenvironment.org/sites/te/files/publications/T%26E_Mind_the_Gap_2016%20FINAL_0.pdf)

<sup>12</sup> [https://www.epa.gov/sites/production/files/2014-01/documents/lithium\\_batteries\\_lca.pdf](https://www.epa.gov/sites/production/files/2014-01/documents/lithium_batteries_lca.pdf)

recommends, among other initiatives, to increase the lifetime of a battery and incorporate recovered materials in the production of new batteries.<sup>13</sup>

As per Toyota's 2016 environmental report,<sup>14</sup> Toyota states that it innovated a technology that would enable adoption of longer-lasting batteries made of magnesium. Although the technology is at the incipient stage, this demonstrates Toyota's commitment to tackle undesirable risks stemming from batteries used in its hybrid and electric vehicles. Furthermore, Toyota states that it has built its own recovery network to collect end-of-life hybrid vehicle (HV) batteries to be recycled. The batteries are recycled or remanufactured/reused as replacement batteries or as stationary storage batteries in renewable power generation systems.

In Sustainalytics' opinion, Toyota demonstrates awareness of the environmental risks stemming from battery disposal, and has in place a strong approach to prevent and mitigate negative environmental impacts stemming from increased adoption of batteries in its vehicles.

### Section 3: Contextual Impact of Use of Proceeds

#### **Contribution of TMCC Green Bond Framework to national transportation emission reduction targets**

The TMCC Green Bond Framework contributes to emissions reduction targets set in the U.S. for the transportation sector. In general, greenhouse gas emissions from the transportation industry have seen an upward trend over the past decades and in 2015 contributed 27% of all GHG emissions in the U.S.<sup>15</sup> Using alternative vehicles will be one of the key drivers on the way to a cleaner U.S. transportation industry.

**Table 2: A comparative analysis of proposed fuel economy and GHG emissions standards for fleet light-duty vehicles and passenger cars across the U.S. and EU.<sup>16</sup>**

	U.S target	U.S. target deadline	E.U. target	E.U. target deadline
<b>Fuel Economy</b> (CAFE standards)	7.2 l/100 km	2015	5.6 l/100 km	2015
	32.6 MPG	2015	40.9 MPG	2015
<b>Fuel Economy</b> (CAFE standards)	5.7 l/100 km	2021	4.1 l/100 km	2021
	42.0 MPG	2021	56.9 MPG	2021
<b>GHG Emissions</b> (NEDC standards)	177 gCO <sub>2</sub> /km	2015	130 gCO <sub>2</sub> /km	2015
	138 gCO <sub>2</sub> /km	2021	95 gCO <sub>2</sub> /km	2021

<sup>13</sup> [https://www.epa.gov/sites/production/files/2014-01/documents/lithium\\_batteries\\_lca.pdf](https://www.epa.gov/sites/production/files/2014-01/documents/lithium_batteries_lca.pdf)

<sup>14</sup> <https://www.toyota.com/usa/environmentreport2016>

<sup>15</sup> <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

<sup>16</sup> The International Council on Clean Transportation, <http://www.theicct.org/info-tools/global-passenger-vehicle-standards>  
European Commission - Climate Action, [https://ec.europa.eu/clima/policies/transport/vehicles/cars\\_en](https://ec.europa.eu/clima/policies/transport/vehicles/cars_en)

Given (i) the proportionally high contribution of the transportation sector to GHG emissions in the U.S., and (ii) the targets set by the U.S. to reduce GHG emissions and reduce fuel economy, Sustainalytics is of the opinion that the TMCC Green Bond Framework will contribute to growing a more sustainable transportation system.

### ***Advancement of U.N. Sustainable Development Goals***

The transportation industry is one of the major contributors to climate change and urban pollution – two prominent global sustainability challenges that put at risk human health and the environment. For example, the World Health Organization states that more than 90% of global population is exposed to air pollution levels exceeding its standards, leading to illnesses and premature deaths<sup>17</sup>. In the U.S., a 2013 study found that road transportation is one of the most significant contributors to air emissions causing 53,000 premature deaths annually.<sup>18</sup>

To support global efforts in resolving sustainability challenges, the United Nations adopted in September 2015, 17 Sustainable Development Goals (SDGs) that provide practical targets and solutions for governments and private sector organizations. For instance, Goal 3 – Good Health and Well-being – has a target 3.9: “By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.” Another example is Goal 12 – Sustainable Production and Consumption – that encourages a holistic approach towards adoption and dissemination of sustainable practices, including minimization of pollutants generated throughout the entire product lifecycle. A related target under this goal is 12.6: “Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.”

By incentivizing consumers to choose ‘clean’ vehicles, TMCC’s Green Bond Framework contributes to the achievement of the mentioned above targets of the SDGs.

### **Conclusion**

The net proceeds of the TMCC Green Bond will contribute to increased market presence of Toyota’s alternative vehicles, which will contribute to the reduction of greenhouse gas and other air emissions. The TMCC Green Bond Framework eligibility criteria surpass the low threshold for impact set by the U.S. EPA SmartWay certification, and are closer to the criteria for the SmartWay Elite certification, which represent the highest threshold for impact by green vehicles as per the U.S. EPA. Based on the above, Sustainalytics is of the opinion that the TMCC Green Bond Framework has set reasonable eligibility criteria, and that the models funded will create meaningful environmental impact. Moreover, the TMCC Green Bond reinforces Toyota’s commitment to sustainability, specifically with respect to decarbonization of its products. Based on the above points, and the TMCC Green Bond’s alignment with the GBP 2017, Sustainalytics considers the TMCC Green Bond to be robust, credible and transparent.

<sup>17</sup> <http://www.who.int/mediacentre/news/releases/2016/air-pollution-estimates/en/>

<sup>18</sup> <http://news.mit.edu/2013/study-air-pollution-causes-200000-early-deaths-each-year-in-the-us-0829>

## APPENDICES

### Appendix 1: Toyota/ Lexus models that qualify as per Eligibility Criteria as of July 2017

Make	Model	City MPG <sup>(1)</sup>	Highway MPG <sup>(1)</sup>	EPA Smog Rating
Toyota	Avalon Hybrid	40	39	9
Toyota	Camry Hybrid <sup>(2)</sup>	40-42	37-38	9
Toyota	Mirai	66 <sup>(3)</sup>	66 <sup>(3)</sup>	10
Toyota	Prius, Prius C, Prius V	43-54	39-50	9-10
Toyota	Prius Prime	55 / 133 <sup>(4)</sup>	53 / 133 <sup>(4)</sup>	10
Lexus	CT 200h	43	40	9
Lexus	ES 300h	40	39	9

Source: TMCC

- (1) Miles per gallon (“MPG”) or MPG equivalent (“MPGe”), which represents the number of miles a vehicle can go using a quantity of fuel with the same energy content as a gallon of gasoline
- (2) Varies by model; Includes Camry Hybrid LE and Camry Hybrid XLE/SE
- (3) Figures are miles per kilogram of hydrogen. One kilogram of hydrogen is approximately equal to a gallon of gasoline ([https://www.fueleconomy.gov/feg/fcv\\_sbs.shtm](https://www.fueleconomy.gov/feg/fcv_sbs.shtm))
- (4) 55 city / 53 highway MPG in hybrid mode. 133 MPGe in electric mode.

## Appendix 2: Overview of ACEEE greencars.org green scores and rankings of Toyota/Lexus models eligible for financing under the TMCC Green Bond

Year	Make	Model	Emission Standard	MPG City	MPG Hwy	Green Score	Ranking
2017	TOYOTA	AVALON HYBRID	Tier 3 Bin 30 / LEV-III SULEV30/PZEV	40	39	53	Above Average
2017	TOYOTA	CAMRY HYBRID LE	Tier 3 Bin 30 / LEV-III SULEV30/PZEV	42	38	54	Above Average
2017	TOYOTA	MIRAI	Tier 3 Bin 0 / LEV III ZEV	67	67	51	Above Average
2017	TOYOTA	PRIUS	Tier 3 Bin 30 / LEV-III SULEV30/PZEV	54	50	59	Superior
2017	TOYOTA	PRIUS C	LEV-III SULEV30	48	43	58	Above Average
2017	TOYOTA	PRIUS V	Tier 3 Bin 30 / LEV-III SULEV30	43	39	55	Superior
2016	TOYOTA	PRIUS PRIME	LEV-III SULEV30	55	53	59	Superior
2017	LEXUS	CT 200H	Tier 3 Bin 30 / LEV-III SULEV30	43	40	55	Above Average
2017	LEXUS	ES 300H	Tier 3 Bin 30 / LEV-III SULEV30/PZEV	40	39	53	Above Average

Source: ACEEE rating greencars.org , [http://greencars.org/greencars-ratings?shs\\_term\\_node\\_tid\\_depth=2464&field\\_class\\_tid=All&field\\_year\\_tid=All](http://greencars.org/greencars-ratings?shs_term_node_tid_depth=2464&field_class_tid=All&field_year_tid=All)

## Appendix 3: Green Bond/Green Bond Programme External Review Form

### Green Bond / Green Bond Programme External Review Form

#### Section 1. Basic Information

**Issuer name:** Toyota Motor Credit Corporation (TMCC)

**Green Bond ISIN or Issuer Green Bond Framework Name, if applicable:**

**Review provider's name:** Sustainalytics

**Completion date of this form:** July 24<sup>th</sup>, 2017

**Publication date of review publication:**

#### Section 2. Review overview

##### SCOPE OF REVIEW

The review assessed the following elements and confirmed their alignment with the GBPs:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Use of Proceeds        | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting                                    |

##### ROLE(S) OF REVIEW PROVIDER

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Consultancy (incl. 2 <sup>nd</sup> opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification   | <input type="checkbox"/> Rating        |
| <input type="checkbox"/> Other ( <i>please specify</i> ):                       |  |

##### EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW (*if applicable*)

Please refer to Green Bond Framework and Second Opinion Document above.

### Section 3. Detailed review

#### 1. USE OF PROCEEDS

**Overall comment on section (if applicable):**

The net proceeds of the TMCC Green Bond will be allocated towards financing new retail loan and lease contracts originated by TMCC for Toyota and Lexus vehicle models that meet all three of the eligibility criteria below:

- (i) Vehicles that are gas-electric hybrids or alternative-fuel powertrain vehicles;
- (ii) Vehicles that have a minimum highway and city miles per gallon (MPG or MPG equivalent) of 35; and
- (iii) Vehicles that have a United States Environmental Protection Agency (“EPA”) Smog Rating of 8 or better (where 10 is the cleanest), as determined by the EPA for the purchase of a vehicle in California.

The TMCC Green Bond Framework eligibility criteria surpass the low threshold for impact set by the U.S. EPA SmartWay certification, and are closer to the criteria for the SmartWay Elite certification, which represent the highest threshold for impact by green vehicles as per the U.S. EPA. In practice, all models to be funded by the TMCC Green Bond have a smog rating and MPG range that is higher than that set out by the Use of Proceeds eligibility criteria. Based on the above, Sustainalytics is of the opinion that the TMCC Green Bond Framework has set reasonable eligibility criteria, and that the models funded will create meaningful environmental impact

**Use of proceeds categories as per GBP:**

- |  |   |
|--|---|
| <input type="checkbox"/> Renewable energy  | <input type="checkbox"/> Energy efficiency  |
| <input type="checkbox"/> Pollution prevention and control  | <input type="checkbox"/> Sustainable management of living natural resources               |
| <input type="checkbox"/> Terrestrial and aquatic biodiversity conservation   | <input checked="" type="checkbox"/> Clean transportation: Hybrid and alternative vehicles |
| <input type="checkbox"/> Sustainable water management  | <input type="checkbox"/> Climate change adaptation  |
| <input type="checkbox"/> Eco-efficient products, production technologies and processes   | <input type="checkbox"/> Other (please specify):  |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs |   |

If applicable please specify the environmental taxonomy, if other than GBPs:

## 2. PROCESS FOR PROJECT EVALUATION AND SELECTION

**Overall comment on section (if applicable):**

Eligible models are selected by TMCC’s Treasury team based on the eligibility criteria above. Once the eligible models have been determined, TMCC uses automated reports to identify all retail finance and lease contracts for which the underlying assets are eligible models. Only new contracts for which the underlying asset is an eligible model are funded with the TMCC Green Bond proceeds. Sustainalytics is of the opinion that this is in line with industry norms.

**Evaluation and selection**

- Defined and transparent criteria for projects eligible for Green Bond proceeds
- Documented process to determine that projects fit within defined categories
- Summary criteria for project evaluation and selection publicly available
- Other (please specify):

**Information on Responsibilities and Accountability**

- Evaluation / Selection criteria subject to external advice or verification
- In-house assessment
- Other (please specify):

## 3. MANAGEMENT OF PROCEEDS

**Overall comment on section (if applicable):**

The net proceeds to TMCC from the TMCC Green Bond will initially be deposited by TMCC into one or more segregated accounts, which will be managed by TMCC’s Treasury team. Pending allocation, proceeds will be invested in money market instruments until applied to new originations of eligible models. The proceeds will be allocated as new loans and leases for the eligible models are originated. No proceeds will be used to refinance existing loans or leases that were originated prior to the settlement of the TMCC Green Bond. Sustainalytics is of the opinion that management of proceeds under the TMCC Green Bond Framework is aligned with industry best-practice.

**Tracking of proceeds:**

- Green Bond proceeds segregated or tracked by the issuer in a systematic manner
- Disclosure of intended types of temporary investment instruments for unallocated proceeds
- Other (please specify):

**Additional disclosure:**

- Allocations to future investments only
- Allocations to both existing and future investments

- |   |   |
|---|---|
| <input type="checkbox"/> Allocation to individual disbursements                             | <input type="checkbox"/> Allocation to a portfolio of disbursements |
| <input checked="" type="checkbox"/> Disclosure of portfolio balance of unallocated proceeds | <input type="checkbox"/> Other <i>(please specify)</i> :            |

#### 4. REPORTING

**Overall comment on section *(if applicable)*:**

TMCC will prepare a monthly TMCC Green Bond Use of Proceeds report certifying:

- the dollar amount of both leases and loans of eligible models originated by eligible vehicle type,
- the amount of any remaining unused proceeds in the segregated account(s), and
- that the proceeds have been used in accordance with the Use of Proceeds section of the framework, as set out on page [4] of this Second Opinion.

TMCC intends to engage a firm of independent accountants to perform agreed upon procedures with respect to the amounts reported. The monthly Use of Proceeds report showing the allocation of the TMCC Green Bond proceeds will be posted on TMCC's Investor Relations website:

[https://www.toyotafinancial.com/pub/w/investor\\_relation](https://www.toyotafinancial.com/pub/w/investor_relation)

Although TMCC has disclosed to Sustainalytics that its internal processes do not allow for transaction-level impact reporting, the issuer has indicated a willingness to work with investors that require such reporting to help them develop a methodology to estimate relevant environmental impact specifically for the vehicles that will be funded through the TMCC Green Bond. Sustainalytics views this effort positively.

**Use of proceeds reporting:**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Project-by-project | <input type="checkbox"/> On a project portfolio basis    |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other <i>(please specify)</i> : |

**Information reported:**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Allocated amounts    | <input type="checkbox"/> GB financed share of total investment |
| <input type="checkbox"/> Other <i>(please specify)</i> : |  |

**Frequency:**

- |  |                                      |
|--|--------------------------------------|
| <input type="checkbox"/> Annual  | <input type="checkbox"/> Semi-annual |
| <input checked="" type="checkbox"/> Other <i>(please specify)</i> : Allocation reporting will be disclosed monthly |                                      |

**Impact reporting:**

- |  |  |
|--|--|
| <input type="checkbox"/> Project-by-project            | <input type="checkbox"/> On a project portfolio basis    |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other <i>(please specify)</i> : |

**Frequency:**

- |  |                                      |
|--|--------------------------------------|
| <input checked="" type="checkbox"/> Annual               | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other <i>(please specify)</i> : |                                      |

**Information reported (expected or ex-post):**

- |   |   |
|---|---|
| <input type="checkbox"/> GHG Emissions / Savings  | <input type="checkbox"/> Energy Savings |
| <input checked="" type="checkbox"/> Other ESG indicators <i>(please specify)</i> : See reporting text in box #4 |   |

**Means of Disclosure**

- |   |   |
|---|---|
| <input type="checkbox"/> Information published in financial report  | <input type="checkbox"/> Information published in sustainability report     |
| <input type="checkbox"/> Information published in ad hoc documents  | <input checked="" type="checkbox"/> Other <i>(please specify)</i> : Website |
| <input type="checkbox"/> Reporting reviewed <i>(if yes, please specify which parts of the reporting are subject to external review)</i> : |   |

Where appropriate, please specify name and date of publication in the useful links section.

**USEFUL LINKS** *(e.g. to review provider methodology or credentials, to issuer's documentation, etc.)*

Allocation reporting will be disclosed on the following website:

[https://www.toyotafinancial.com/pub/w/investor\\_relation](https://www.toyotafinancial.com/pub/w/investor_relation)

**SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE**

**Type(s) of Review provided:**

- |  |  |
|--|--|
| <input type="checkbox"/> Consultancy (incl. 2 <sup>nd</sup> opinion) | <input type="checkbox"/> Certification |
| <input checked="" type="checkbox"/> Verification / Audit             | <input type="checkbox"/> Rating        |
| <input type="checkbox"/> Other <i>(please specify)</i> :             |  |

**Review provider(s):**

**Date of publication:**

## **ABOUT ROLE(S) OF REVIEW PROVIDERS AS DEFINED BY THE GBP**

- (i) **Consultant Review:** An issuer can seek advice from consultants and/or institutions with recognized expertise in environmental sustainability or other aspects of the issuance of a Green Bond, such as the establishment/review of an issuer's Green Bond framework. "Second opinions" may fall into this category.
- (ii) **Verification:** An issuer can have its Green Bond, associated Green Bond framework, or underlying assets independently verified by qualified parties, such as auditors. In contrast to certification, verification may focus on alignment with internal standards or claims made by the issuer. Evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria.
- (iii) **Certification:** An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against an external green assessment standard. An assessment standard defines criteria, and alignment with such criteria is tested by qualified third parties / certifiers.
- (iv) **Rating:** An issuer can have its Green Bond or associated Green Bond framework rated by qualified third parties, such as specialised research providers or rating agencies. Green Bond ratings are separate from an issuer's ESG rating as they typically apply to individual securities or Green Bond frameworks / programmes.

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# SUSTAINALYTICS

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Sustainalytics  
[info@sustainalytics.com](mailto:info@sustainalytics.com)  
[www.sustainalytics.com](http://www.sustainalytics.com)

