# **Toyota Motor Corporation - Climate Change 2020**

## **C0. Introduction**

## **C0.1**

### **(C0.1) Give a general description and introduction to your organization.**

Toyota primarily conducts business in the automotive industry. Toyota also conducts business in finance and other industries. Toyota sold 8,958 thousand vehicles in this reported year on a consolidated basis (FY2020). Toyota sells its vehicles in approximately 190 countries and regions. Toyota’s primary markets for its automobiles are Japan, North America, Europe and Asia. Toyota’s business segments are automotive operations, financial services operations and all other operations. Toyota’s automotive operations include the design, manufacture, assembly and sale of passenger vehicles, minivans and commercial vehicles such as trucks and related parts and accessories. Toyota’s financial services business consists primarily of providing financing to dealers and their customers for the purchase or lease of Toyota vehicles. Toyota’s financial services business also provides retail installment credit and leasing through the purchase of installment and lease contracts originated by Toyota dealers. Related to Toyota’s automotive operations, Toyota has ITS development. Toyota’s all other operations business segment includes the design and manufacture of prefabricated housing and information technology related businesses including a web portal for automobile information called GAZOO.com, and the sales promotion of KDDI communication products (au brand) etc. Toyota had net revenues of ¥29,929,992 million in this reported year (Automotive: ¥ 26,863,514 million, Financial Services: ¥2,190,559 million, All Other: ¥1,646,118 million).

## **C0.2**

### **(C0.2) State the start and end date of the year for which you are reporting data.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Start date** | **End date** | **Indicate if you are providing emissions data for past reporting years** | **Select the number of past reporting years you will be providing emissions data for** |
| Reporting year | January 1 2019 | December 31 2019 | Yes | 1 year |

## **C0.3**

### **(C0.3) Select the countries/areas for which you will be supplying data.**

Algeria

Argentina

Australia

Austria

Bahrain

Belgium

Brazil

Canada

Chile

China

China, Hong Kong Special Administrative Region

Colombia

Croatia

Cyprus

Czechia

Denmark

Egypt

Estonia

Finland

France

Germany

Greece

Hungary

India

Indonesia

Iraq

Ireland

Israel

Italy

Japan

Jordan

Kazakhstan

Kuwait

Latvia

Lebanon

Lithuania

Luxembourg

Malaysia

Malta

Mexico

Netherlands

New Zealand

Norway

Oman

Pakistan

Peru

Philippines

Poland

Portugal

Puerto Rico

Qatar

Republic of Korea

Romania

Russian Federation

Saudi Arabia

Singapore

Slovakia

Slovenia

South Africa

Spain

Sweden

Taiwan, Greater China

Thailand

Turkey

United Arab Emirates

United Kingdom of Great Britain and Northern Ireland

United States of America

Venezuela (Bolivarian Republic of)

Viet Nam

## **C0.4**

### **(C0.4) Select the currency used for all financial information disclosed throughout your response.**

JPY

## **C0.5**

### **(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.**

Financial control

## **C-TO0.7/C-TS0.7**

### **(C-TO0.7/C-TS0.7) For which transport modes will you be providing data?**

Light Duty Vehicles (LDV)

Heavy Duty Vehicles (HDV)

## **C1. Governance**

## **C1.1**

### **(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

## **C1.1a**

### **(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

|  |  |
| --- | --- |
| **Position of individual(s)** | **Please explain** |
| Director on board | In Toyota’s organization, the Board of Directors is responsible for oversight of climate issues. In particular, the Executive Vice President (EVP) in charge of technology development, a Member of the Board of Directors, provides guidance and supervision concerning the promotion of responses to climate issues, including planning/execution, assessment, and monitoring of strategies/goals to address climate-related risks/opportunities, and is responsible for those matters. The reason for the above is that climate-related risks/opportunities are issues at stake for Toyota’s business. Strategies for technology development and products, as well as their implementation and management, are a core part of addressing climate-related risks/opportunities and are defined as one of the Toyota’s most important business agenda items. This forms the rationale of his/her responsibilities. As a case example of climate-related decision-making by the executive (the EVP in charge of technology development) in the reporting year, the goal aiming for the sales of more than 5.5 million electrified vehicles by 2030 was moved forward by about five years while a plan to promote an electrification system was determined and announced. This is expected to contribute to a significant reduction of greenhouse gas emissions at the product use stage, which accounts for the overwhelming proportion of such emissions in the automobile industry. Note that the situation in the reporting year is as stated above, but since February 2020, the Vice Chairman of the Board of Directors has been appointed as a newly established Chief Sustainability Officer (CSO) to provide guidance and supervision in all sustainability areas. The CSO chairs the Sustainability Meeting (SM) and reports to the Board of Directors on the content of discussions of the meeting. |

## **C1.1b**

### **(C1.1b) Provide further details on the board’s oversight of climate-related issues.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Frequency with which climate-related issues are a scheduled agenda item** | **Governance mechanisms into which climate-related issues are integrated** | **Scope of board-level oversight** | **Please explain** |
| Scheduled – all meetings | Reviewing and guiding strategy  Reviewing and guiding major plans of action  Reviewing and guiding business plans  Monitoring and overseeing progress against goals and targets for addressing climate-related issues | <Not Applicable> | Toyota oversees its climate agenda through integrating climate issues into selected governance mechanisms at each monthly Board of Directors meeting. Below is how the governance mechanisms contribute to climate agenda oversight. Three of the climate-integrated governance mechanisms are explained here . (1) Reviewing and guiding strategy (2) Reviewing and guiding major plans of action (3) Reviewing and guiding business plans Incorporating or considering climate issues into the above-mentioned (1) - (3) governance mechanisms at the monthly Board of Directors meeting is effective in ensuring proposals and implementations of strategies that match social trends including climate issues. For instance, integrating climate-related issues, including risks and opportunities related to product-related regulations such as fuel economy/tailpipe emission regulations, and risks and opportunities relating to development of low carbon technology, into the (1) - (3) governance mechanisms contributes to in developing Toyota’s long-term strategy including Toyota Environmental Challenge 2050, and proposing/reviewing mid-and-long term targets and the action plan. As an example in the reporting year, the mid-and-long term initiatives relevant to the Challenge 2050, the 2020-2030 goal of making more electrified vehicles available to the public, with a focus on development and penetration of electrified vehicles, was moved forward by about five years and it was developed and announced based on (1) - (3) governance mechanisms. Thus, (1) - (3) governance mechanisms contribute to climate agenda oversight at the Board of Directors, and proposing and implementing strategies that match social trends including climate issues. |

## **C1.2**

### **(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of the position(s) and/or committee(s)** | **Reporting line** | **Responsibility** | **Coverage of responsibility** | **Frequency of reporting to the board on climate-related issues** |
| Chief Risks Officer (CRO) | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable> | Half-yearly |
| Other, please specify (The Head of a Company responsible for technology development (also served as a director in the reporting year)) | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable> | Quarterly |

## **C1.2a**

### **(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

Description of where in the organizational structure the position/committee lies

The Board of Directors is the ultimate decision-making and oversight body in the corporate structure to address climate challenges. The Sustainability Meeting (SM) is set as an execution arm in accordance with decisions made by the Board of Directors.

The SM, which consists of Chief Risk Officers (CRO) and outside board members, is held biannually.

The SM is in charge of comprehensively looking at changes in ESGs and other situations to realize mid-and-long term sustainable growth, and checking/executing important business agenda items to enhance competitiveness and to manage risks.

The SM discusses/evaluates overall corporate governance, risk management, and security trade control as main agenda items, including environmental issues such as tighter regulations on fuel economy in each country, and also, the SM has oversight of monitoring of the attainment/progress status of overall targets and execution of countermeasures.

The CRO chairs the SM, and is responsible for discussion results in the SM and reporting to the Board of Directors.

Moreover, other than the SM, there are a Product Environment Committee, which manages assessment of product-related risks and opportunities, proposal/execution of strategy and planning, and monitoring; a Production Environment Committee, which manages assessment of plants/production-related risks and opportunities, and decisions on countermeasures, and monitoring; and a Resource Recycling Committee, which discusses/decides what to do about recycling of resources. These committees make practical examinations within their respective fields. The results of these committees are reported from the divisions/officers in charge of the environmental field to the Head of a Company (also served as a board member in the reporting year) who manages technology development, and directly to the SM and the more frequently held Board of Directors meeting, which are held about four times a year.

Why responsibilities for climate-related issues have been assigned to this position/committee.

The CRO is responsible for the commanding/supervision authority for Toyota’s business risks/opportunities, and Toyota’s climate-related issues, such as risks/opportunities associated with product/technology/operations, are among the most important business risks/opportunities. This suggests that it is rational for the CRO to assume responsibilities in terms of two perspectives: responses to climate-related issues and business risk management.

The Head of a Company in charge of technology development assumes responsibilities, because the environment-related division, which is the secretariat of the Product Environment Committee, the Production Environment Committee, and the Resource Recycling Committee, belongs to the Company in charge of technology development and is responsible for specific examinations.

A company-specific description of the responsibilities of each position and/or committee with regard to the assessment and monitoring of climate-related issues

The CRO and the Head of a Company in charge of technology development are responsible for climate assessment and monitoring. To be specific, the Head of a Company in charge of technology development oversees the Product Environment Committee, the Production Environment Committee, and the Resource Recycling Committee, and is responsible for the assessment and monitoring of issues at the practical level. At the biannually held SM, the CRO participates as Chairman in the assessment of Toyota's climate-related risks and opportunities by considering/exchanging opinions on said risks and opportunities at a global level while assuming responsibilities for said assessment results.

The CRO and the Head of a Company in charge of technology development, from the standpoint of each of them, are also responsible for monitoring and checking responses to the climate agenda (e.g. electrified vehicles strategy) and their progress, examining/deciding Toyota’s global-scale responses based on the monitoring results, and reporting to the Board of Directors. For example, in the reporting year, in response to the demand for electrified vehicles growing faster than expected due to the growing momentum for reduction of CO2 emissions, Toyota decided to move forward by about five years the plan of "the challenges toward the popularization of electrified vehicles for the decade 2020–2030," which was announced in 2017.

Note that the situation in the reporting year is as stated above, but since February 2020, the Vice Chairman of the Board of Directors has been appointed as a newly established Chief Sustainability Officer (CSO), and the CSO has been chairing the SM on behalf of the CRO. As a result, governance in the sustainability area has been reinforced more than ever, such as the more frequent holding of the SM.

## **C1.3**

### **(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

|  |  |  |
| --- | --- | --- |
|  | **Provide incentives for the management of climate-related issues** | **Comment** |
| Row 1 | Yes |  |

## **C1.3a**

### **(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

|  |  |  |  |
| --- | --- | --- | --- |
| **Entitled to incentive** | **Type of incentive** | **Activity inventivized** | **Comment** |
| Director on board | Monetary reward | Efficiency project | Remuneration and bonuses paid to board members have to ensure balance with Toyota’s business performance, and consider their job responsibility, performance and bonus standards in countries they are from. Business performance includes sales of low-emission vehicles, EVs, PEVs and FCVs, and effect of energy-saving activities at plants. A proposal of remuneration and bonuses paid to board members and the system are determined at Executive Compensation Committee, which is made up a majority by outside directors. |
| Other, please specify (consolidated overseas affiliates) | Non-monetary reward | Emissions reduction project | Toyota has the Global Environment Award to recognize excellent improvements such as CO2 reduction and recycling activities at consolidated overseas affiliates. A testimonial and a trophy are presented to awardees, and their best practice is shared globally to honor their achievement and learn/introduce the practice with each other. Such best practice is also introduced in our Environmental Report. In the reporting year, the top 6 teams from 6 regions in the world presented their achievement in Japan. The Thai team that presented their energy-saving effort using “Karakuri” was given the most excellent award. |
| All employees | Monetary reward | Energy reduction project | Toyota has a campaign, “Creative Suggestion System.” Employees make proposals for emission cuts, and proposals with certain results are given money reward (500 yen - 200 thousand yen). Also, the excellent proposals are screened again, and selected proposal are sent to “the Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology.” Every year, Toyota employees are awarded “the Prize for Creativity.” |

## **C2. Risks and opportunities**

## **C2.1**

### **(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?**

Yes

## **C2.1a**

### **(C2.1a) How does your organization define short-, medium- and long-term time horizons?**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **From (years)** | **To (years)** | **Comment** |
| Short-term | 0 | 5 |  |
| Medium-term | 5 | 15 |  |
| Long-term | 15 | 50 |  |

## **C2.1b**

### **(C2.1b) How does your organization define substantive financial or strategic impact on your business?**

■A definition of 'substantive financial or strategic impact' when identifying or assessing climate-related risks

At Toyota, based on the Toyota Global Risk management Standard (TGRS), the level of seriousness of various risks, including climate change, to Toyota's business is assessed from the perspective of the magnitude of impact and vulnerabilities. The magnitude of impact is assessed in a complex manner by Companies/Groups based on the four factors of financial impact, reputation, laws and regulations, and business continuation. Vulnerabilities are quantified in accordance with countermeasures and response organizations. The impact and vulnerabilities are then identified and recognized as serious risks. The level of seriousness of risks is comprehensively determined from the magnitude of impact and vulnerability to the business, and its substantive financial or strategic impact on the business is defined, followed by the conclusive confirmation of the level of seriousness at the Sustainability Meeting (SM).

■A description of the quantifiable indicator(s) used to define substantive financial or strategic impact

As stated above, the level of seriousness of risks is assessed based on their impact and vulnerabilities. The magnitude of impact is assessed in a complex manner based on the four factors of financial impact, reputation, laws and regulations, and business continuation. Financial impact is assessed on a 5-point scale using the ratio to sales as an indicator, and other indicators including reputations, laws and regulations, and business continuation are also assessed on a 5-point scale. Vulnerabilities are assessed on the response level. These assessments are comprehensively examined before the level of seriousness of risks is conclusively assessed on a 4-point scale and confirmed at the SM.

## **C2.2**

### **(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.**

### **Value chain stage(s) covered**

Direct operations

Upstream

Downstream

### **Risk management process**

Integrated into multi-disciplinary company-wide risk management process

### **Frequency of assessment**

More than once a year

### **Time horizon(s) covered**

Short-term

Medium-term

Long-term

### **Description of process**

■The process used to determine which risks and opportunities could have a substantive financial or strategic impact and the process for responding to climate-related risks and opportunities At the company level, short-term, medium-term, and long-term risks and opportunities are identified and assessed by the Product Environment Committee, the Production Environment Committee, and the Resource Recycling Committee. Risks and opportunities are identified and assessed by discussions based on the responsible work of the divisions in charge and relevant officers, with the respective committees being responsible for the following items: the Product Environment Committee is responsible for fuel economy regulations and procurement related to the upstream and downstream of products, the Production Environment Committee is responsible for direct operations such as CO2 emission regulations on plants, and the Resource Recycling Committee is responsible for the use of recycled materials and product recycling. These three committees are held with the participation of officer or general manager-class members of relevant divisions such as technology, environment, finance, procurement, and sales, and are responsible for the following work: examining and implementing countermeasures; incorporating the countermeasures into the short-term strategy "Toyota Environmental Action Plan," the medium-term strategy "2030 Milestone," and the long-term strategy "Toyota Environmental Challenge 2050"; and managing the progress of those actions. Each of these three committees is held approximately quarterly, and depending on the levels of seriousness of risks and opportunities, the results of discussion are reported to the Sustainability Meeting (SM) that is held biannually and to the Board of Directors to determine the response. Risks and opportunities at the asset level are identified/assessed in the following manner; Groups/Companies in charge of each region collect and analyze serious risks and opportunities before reporting/sharing them at the SM approximately annually. Company Presidents/Group Chief Officers supervise the activities of the Companies, and at the subordinate level, the general managers supervise the activities of divisions. Each risk is identified and assessed by each division based on the TGRS described in C2.1b, and then collected and reported to the SM, followed by the confirmation of the risk and opportunity assessment results while a response policy is examined and determined. ■A case study of Physical risks Situation As many plants are located in areas vulnerable to natural disasters associated with climate change, it is expected to have a risk of production stoppage due to damage on plants as well as due to suspended procurement. In the past, the suspension of procurement caused by flooding in the Asian region led to production suspension. Task It is necessary to create a system, during normal times, for appropriately identifying and assessing the risks of natural disasters associated with climate change and for responding to them. Action & Result Since natural disasters are risks at the asset level, they were comprehensively examined based on the magnitude of impact and vulnerabilities based on the said TGRS at the Company/Group levels in charge of each region. Specifically, the magnitude of impact was quantified by factors such as financial impact, reputation, laws and regulations, and business continuation, and vulnerabilities were examined at the response level; as a result, the production stoppage at plants due to disasters was identified and assessed as a serious business risk. The results of this assessment are reported to the SM, and the direction of its response was confirmed. Regarding the response, the “Business Continuity Management (BCM)” was created and regularly revised, and disaster information is reported to the SM as needed. Based on the BCM, storing emergency supplies during normal times has been taken as countermeasures. As for procurement, in particular, “visualization of supply chain information” and “countermeasures against disasters” have been promoted even during normal times, and a disaster-resistant supply chain has been constructed via regular training to establish a database for its effective utilization in the event of disasters. In October of the reporting year, Japan suffered heavy rain brought by Typhoon No. 19 (Hagibis), which left extensive damage in Japan where many Toyota plants and supplier plants are located. However, production stoppage was managed to be prevented by utilizing a database that allowed the grasping of the extent of damage to the plants and the supply status of procurement in real time. ■ A case study of Transitional opportunities Situation Toyota owns the world's most competitive technology in electrified vehicles, including Prius, Prius PHV, and Mirai, and has a rich lineup of products. It is anticipated that opportunities to increase the demand for electrified vehicles, such as HVs, PHVs, EVs, and FCVs, of which Toyota holds an advantage, will increase because of the tighter regulations on vehicle emissions and raised awareness of consumers on climate change issues. Task In order to utilize the technological competitiveness of electrified vehicles and to take advantage of their increased demand as a sales opportunity, it is necessary to propose, execute, and monitor strategies and plans for popularization and expansion of electrified vehicles. Action & Result The Product Environment Committee, which is a subordinate body of the SM held quarterly, conducted a detailed assessment of regulations for fuel economy, ZEV, etc. and demands for electrified vehicles by region and others, related to opportunities of increased needs for electrified vehicles and examined the countermeasures. The results were reported to the SM. Upon these identification/assessment/response processes, Toyota determined in the reporting year that there would be an important opportunity to increase the demand for electrified vehicles, and announced that it is expected to move forward by about five years its strategy, which was set within the "2030 Milestones," to sell more than 5.5 million electrified vehicles globally toward 2030. The announcement also referred to the alliance expansion and a recycling system, for the supply of batteries which is essential for the expansion of electrified vehicle production, also showing specific strategies for popularization and expansion of electrified vehicles. In line with this strategy, initiatives have been taken to expand the sales of electrified vehicles; for instance, electrification grades were set for even major products including the Corolla and RAV4 that were remodeled in the reporting year. As a result, it is expected that the increased demand for electrified vehicles can be used as a sales opportunity by making good use of technological competitiveness.

## **C2.2a**

### **(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?**

|  |  |  |
| --- | --- | --- |
|  | **Relevance & inclusion** | **Please explain** |
| Current regulation | Relevant, always included | Risks of current regulations including fuel economy and CO2 emission regulations in countries/regions are crucial for Toyota’s business and are always included in the risk assessment target, given the potentially significant impact on technology development and sales/production planning. For example, in North America, where Toyota’s sales volume is 2.71 million units in the reporting year, which represents 30% of Toyota’s global sales of 8.96 million units, some states require automakers to comply with the ZEV mandate. If Toyota fails to comply with the fuel economy/emission regulations in those states, Toyota may face direct loss, including penalties or purchase of credits. Failure to meet those regulations may also lead to ruining Toyota's environmental image, further leading to indirect sales decline or divestment of investors as a reputation risk. In order to comply with the ZEV mandate, Toyota has been selling PHVs in the US such as Prius PHV and RAV4 PHV, in addition to Mirai of FCV and HVs such as Prius, but EVs have not been sold yet; therefore, future development and sales efforts are necessary. Regarding reputation risks, the ESG awareness among investors outside Japan is rapidly increasing, and since Toyota's foreign ownership accounts for around 20%, appropriate risk management is required. As for current regulations, the relevant divisions in charge of the environment, technology, and regulations in Companies/Groups conduct research to constantly grasp trends. With regard to such information, the "Product Environment Committee" collects it to have discussions on products, the "Production Environment Committee" collects it to have discussions on production activities in plants, and the "Resource Recycling Committee" collects it to have discussions on disposal and recycling. Operating officers chair these three environment-related committees to assess risks and examine countermeasures at the officer/general manager level. Each committee is held quarterly, and the results are discussed at the biannually held Sustainability Meeting (SM) and reported to the Board of Directors. Note that the SM has been held more frequently (quarterly) since 2020. |
| Emerging regulation | Relevant, always included | Future regulations have an impact on a wide scale on Toyota's technology development, product planning, and production planning, and are highly relevant to Toyota's business and thus need to be always included in the assessment. Currently, the fuel economy/emission regulations in each country and region are becoming tighter. In particular, Europe, in which Toyota sells 1.03 million passenger vehicles in the reporting year, is expected to have more bans on the sale of conventional gasoline/diesel vehicles and to impose stronger carbon pricing representing a carbon tax. If Toyota fails to comply with the fuel economy/emission regulations in each region, it may lead to additional costs such as penalties or purchase of credits. A reputation risk derived from the ruining of Toyota's environmental image may also lead to sales decline and divestment of investors. For example, if the sale of conventional gasoline/diesel vehicles (e.g. Aygo or Land Cruiser) is banned in Europe in the future and the sales of electrified vehicles does not reach sufficient numbers, or if it becomes difficult to maintain the competitiveness in fuel-efficient vehicles in response to fuel economy regulations introduced in the Asian region, sales in Europe and Asia may decline sharply. Furthermore, regarding divestment, the ESG awareness of investors outside Japan has been rapidly increasing in recent years, and since Toyota's foreign ownership accounts for around 20%, appropriate risk management is required. The strengthening of carbon pricing may lead to a risk of cost increase for Toyota, which releases more than a total of 5 million metric tons of CO2 as Scope 1 and Scope 2 emissions at the global level. As for the emerging regulation, as in the case of the current regulations, specialized divisions related to the environment, technology, and regulations in Companies/Groups conduct research to constantly grasp the trends. With regard to such information, the Product Environment Committee assesses risks and examines countermeasures at the officer/general manager level. Said Committee is held quarterly, and the results are discussed at the biannually held SM and reported to the Board of Directors. Note that the SM has been held more frequently (quarterly) since 2020. |
| Technology | Relevant, always included | As a climate change policy, fuel economy regulations for automobiles are being tightened globally, and customers' needs for low-carbon vehicles are also increasing. As development and cost reduction of low-carbon technology including electrification technology are important management issues, they are relevant and must be always included in the assessment. Since Toyota launched the hybrid vehicle Prius for the first time in 1997 in consideration of tighter fuel economy regulations and market needs for low-emission vehicles, Toyota has sold a total of more than 15 million electrified vehicles including hybrid vehicles, as of 2019. In addition, in the reporting year, it announced that it is expected to move forward by about five years to achieve the sales target of 5.5 million electrified vehicles by 2030, and has announced that it will proceed with the development of electrification technology. Although Toyota has been leading the expansion of the electrified vehicle market up until now, electrification has been a common issue in the automobile industry, and falling behind in addressing this issue in the future may ruin Toyota's image of an environmentally advanced corporation that has been built up until now, which is a risk leading to sales decline and investors' divestment. In particular, the ESG awareness has been rapidly increasing among investors outside Japan, and since Toyota's foreign ownership accounts for around 20%, appropriate risk management is required. As a meeting body for discussing technology-related risks and countermeasures at a company-wide level, there is the SM held biannually. The meeting collects information from the Companies/Groups and conducts short- to long-term risk assessments related to climate change, including technology-related risks. As stated in C2.2, the “Toyota Global Risk management Standard (TGRS)” is the standard for the risk assessment process at the SM. Note that the SM has been held more frequently (quarterly) since 2020. Specifically, with regard to the technology information required by laws and regulations in each country, the Regulation & Certification Division obtains regulatory information regarding the fuel economy of automobiles, and reports it to the Company Presidents/Group Chief Officers. |
| Legal | Relevant, always included | Toyota sells its products worldwide; for instance, in the reporting year, Toyota recorded the sales volume of 2.24 million units in Japan, 2.71 million units in North America, and 1.03 million units in Europe. Meanwhile, more countries/regions have been tightening or introducing fuel economy/CO2 emission regulations as part of climate change policy, such as CAFE standards and ZEV programs in the US, and emission standards in the EU. Moreover, with regard to information disclosure, various countries are also discussing the mandatory disclosure of non-financial information as well as the introduction of laws and regulations allowing the request for disclosure based on future prospects. In tightening or introducing such regulations, there is a possibility that a lawsuit may be filed due to a difference in the interpretation between entities such as investors and companies. For example, in recent years, there have been cases in which lawsuits were filed against other companies over the disclosure of information on climate change. If there is a discrepancy between the perception of investors and the disclosed information, including that of emissions and fuel economy such as Scope 1, 2, and 3 described in the Environmental Report issued by Toyota and other disclosed materials, it may lead to a lawsuit; therefore, it is necessary to proceed with risk management such as appropriate calculation/disclosure and acquisition of a third-party guarantee of data. As a meeting body for discussing legal risks and countermeasures at the company-wide level, the SM is held biannually. The meeting collects information from the Companies/Groups and conducts short- to long-term risk assessments related to climate change, including legal risks. As stated in C2.2, the "Toyota Global Risk management Standard (TGRS)" has been the standard for the risk assessment process at the Meeting. Note that the SM has been held more frequently (quarterly) since 2020. To be specific, the Regulation & Certification Division obtains regulatory information regarding the fuel economy of automobiles in each country, and reports it to the Company Presidents/Group Chief Officers. |
| Market | Relevant, always included | In the reporting year, Toyota announced its prospect that it is about five years ahead of its corporate goal that aims for the sales of more than 5.5 million electrified vehicles by 2030 (1.92 million units in reporting year), as Toyota believes that demand for electrified vehicles will rise in response to the impact of climate change. Regarding the product lineup, it is planned to set electrification grades for all vehicle models by 2025. Electric grades were also set for the Corolla and RAV4 models, which underwent model changes in the reporting year, to accommodate the increasing needs for electrified vehicles in the market. However, if consumer needs for electrified vehicles are lower than Toyota's expectations, it is anticipated that the sales plan of 5.5 million electrified vehicles in 2030, which was announced in the reporting year as mentioned above and is expected to be achieved about five years ahead of schedule, may fall behind, leading to financial risks such as sales decline. As a meeting body for discussing market risks and countermeasures at the company level, the SM is held biannually. The meeting collects information from the Companies/Groups and conducts short- to long-term risk assessments related to climate change including market risks. As stated in C2.2, "Toyota Global Risk management Standard (TGRS)" has been the standard for risk assessment at the SM. Note that the SM has been held more frequently (quarterly) since 2020. |
| Reputation | Relevant, always included | In recent years, corporations' interests in climate change countermeasures have been increasing as knowledge of investors and general consumers about climate change has improved. In addition, research institutions and NGOs have been making active statements about corporate climate change measures. Under these circumstances, Toyota has announced its long-term strategy “Environmental Challenge 2050,” a medium-term strategy “2030 Milestone,” and short-term goals of “6th Toyota Environmental Action Plan” and “7th Toyota Environmental Action Plan,” and has disclosed the progress of its efforts. However, it is pointed out that Toyota's approach to climate change is inadequate when the level of ambitiousness for the goals is considered to be low or when the goals were not achieved as planned; it is anticipated that such an inadequate approach has a risk of being criticized by stakeholders. There is a concern that this criticism may significantly reduce the social image of the corporation and affect Toyota's sales and stock prices. In particular, the ESG awareness has been rapidly increasing among investors outside Japan in recent years, and since Toyota's foreign ownership accounts for around 20%, appropriate risk management is required. As a meeting body for discussing reputation risks and countermeasures at the company-wide level, there is the biannually held SM, in which information is collected from the Companies/Groups to conduct short- to long-term risk assessments related to climate change, including reputation risks. As stated in C2.2, "Toyota Global Risk management Standard (TGRS)" has been the standard for risk assessment at the SM. Note that the SM has been held more frequently (quarterly) since 2020. |
| Acute physical | Relevant, always included | There is a concern that typhoons and floods caused by climate change will put 50 major Toyota plants worldwide at risk. In particular, there is a concern that the production bases in Asia such as Toyota Motor Thailand Co., Ltd. (annual production volume of 530,000 units), which manufactures Toyota's representative models including Corolla and Camry, is exposed to the physical risk of being devastated by typhoons and floods. Many of Toyota's suppliers are also located in Asia, and if these suppliers suffer damages due to major typhoons or floods caused by climate change or their transportation routes are damaged, which would make the procurement to the Toyota plants delayed or suspended, there is a risk that the suspended production will lead to the loss of Toyota's production opportunities and the associated decrease in sales. As a meeting body for discussing acute physical risks and countermeasures at the company-wide level, the SM is held biannually. The meeting collects information from the Companies/Groups and conducts short- to long-term risk assessments related to climate change, including acute physical risks. As stated in C2.2, "Toyota Global Risk management Standard (TGRS)" has been the standard for risk assessment at each SM. Note that the SM has been held more frequently (quarterly) since 2020. |
| Chronic physical | Relevant, always included | Toyota has plants throughout the world. These include Toyota Motor Thailand Co., Ltd. located in Thailand, which produces Corolla and Camry, and the Limited Liability Company “TOYOTA MOTOR” in Saint-Petersburg, Russia, which produces Camry and RAV4. Plants invest in air-conditioning and operate it to suit the climate in their regions, in order to maintain a comfortable workplace environment and the good health of the plant employees. If there is a long-term change in the temperature due to climate change, there is a concern of increased investment in equipment and increased energy costs due to the stronger air-conditioning required. In Aichi Prefecture, where Toyota's Honsha (head office) is located, the average temperature has already risen by approximately 2.1°C when converted for an average of 100 years (according to Nagoya Local Meteorological Observatory), which tends to be higher than the average of the whole world. The risk of cost increase due to the stronger air-conditioning is higher than that of other regions. The operation of air conditioning is often completed by a risk assessment at the asset level. At the asset level, risk information including chronic physical risks is collected from the risk management personnel who are assigned to each division and is reported to the Company Presidents/Group Chief Officers. The risks associated with the practical operations in charge are assessed also at the asset level in reference to the TGRS, as with the company-wide level. Among said information, if any information is assessed to be a serious risk, risk information related to production/operation is submitted to the Production Environment Committee which is held quarterly. Each committee also conducts a risk assessment from a company-wide perspective, and the results are reported to the SM that is held biannually. Note that the SM has been held more frequently (quarterly) since 2020. |

## **C2.3**

### **(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

## **C2.3a**

### **(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

### **Identifier**

Risk 1

### **Where in the value chain does the risk driver occur?**

Downstream

### **Risk type & Primary climate-related risk driver**

|  |  |
| --- | --- |
| Current regulation | Mandates on and regulation of existing products and services |

### **Primary potential financial impact**

Other, please specify (Increased costs associated with fuel economy regulations)

### **Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

### **Company-specific description**

As a climate change policy, more countries/regions have been tightening or introducing automobile fuel economy/emission regulations, such as CAFE standards and ZEV programs in the US, and CO2 emission standards in the EU; therefore, the tightening of regulations can be a risk for Toyota, which sells vehicles globally. Especially in Europe, where Toyota sold about 1.03 million vehicles in the reporting year, the reference value is high, such as a fuel economy regulation of 95 g-CO2/km in 2020, and the regulation values in 2025 and 2030 are expected to be the strictest in the world. Toyota is taking initiatives to comply with this reference value, and has achieved the closest performance to the reference value among automobile manufacturers. Since the launch of its world’s first HV Prius in 1997, Toyota has gained the trust in environmental technologies in countries/regions around the world, and is fully prepared to develop and sell vehicles in order to achieve the regulation value; therefore, compliance with the 2020 regulations is expected to be achieved. However, the regulation values ​​for 2025 and 2030 may be considerably tightened, which poses a risk that compliance with the regulations will not be achieved.

### **Time horizon**

Medium-term

### **Likelihood**

Unlikely

### **Magnitude of impact**

Low

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

### **Potential financial impact figure (currency)**

35191000000

### **Potential financial impact figure – minimum (currency)**

<Not Applicable>

### **Potential financial impact figure – maximum (currency)**

<Not Applicable>

### **Explanation of financial impact figure**

The European automobile emission standards for 2020 are approximately 95 g-CO2/km although the regulation values fluctuate depending on the conditions. Toyota produces and sells vehicles that comply with the regulations through technology development and by environmental research/external affairs, and its emission amount is the closest to the regulation value as compared with other companies; therefore, the regulation value in 2020 is expected to be achieved. The regulation value in 2025 is planned to be tighter by 15% compared to that of 2020, and is expected to be around 81 g-CO2/km. Since it is necessary to expand the sales of ZEVs in order to achieve compliance with this regulation, Toyota is proceeding with the preparations for that, but there is a risk that payment of additional costs will be required if the regulation value is not met in that event of the introduction of ZEVs is delayed or not accepted in the market. The amount of additional costs is estimated for the case where a regulation value in Europe in 2025 is not reached. Toyota has implemented an average annual reduction of approximately 2.4% in g-CO2/km over the last five years, and on the assumption that this reduction pace has continued, it is expected to reach approximately 84 g-CO2/km by 2025. The amount of payment is calculated based on the following assumption for the case where the regulation value in 2025 is not reached. The regulation value is 81 g-CO2/km, the payment for exceeding limits is 95 EUR/g/vehicle (which amounts to 11,400 yen [assuming 1 EUR = 120 yen]), and the sales volume is assumed to be that of Europe in the reporting year (1,029,000 units). The number of vehicles sold covers a wider area as compared with regulated countries, but the impact was calculated as the maximum impact. (84gCO2-81gCO2) × 11,400 (yen)/ (gCO2・units) × 1,029,000 (units) ≒ 35,191 (million yen)

### **Cost of response to risk**

12139000000

### **Description of response and explanation of cost calculation**

The fuel economy standards in Europe for 2020 are approximately 95 g-CO2/km. Toyota produces and sells vehicles that comply with the regulations through technology development and by environmental research/external affairs, and its emission amount is the closest to the regulation value as compared with other companies; therefore, the regulation value in 2020 is expected to be achieved. The regulation value in 2025 is planned to be restricted by 15% compared to that of 2020, and in order to achieve this regulation value, it is a task to accelerate the fuel economy improvement through development/sales of ZEVs. Toyota is proceeding with R&D to address this task. Specific actions to be anticipated are the resources shift to ZEV development, as well as R&D related to the development and capacity enhancement of major components such as batteries, e-axles, and FC stacks, and an associated cost increase is expected. As a result of such R&D approaches, it is anticipated that ZEVs that can achieve the regulation of 2025 can be introduced, that the risk of payment associated with fuel economy regulations can be avoided, and that Toyota's presence in the environmental field can be enhanced. Specifically, Toyota has announced that it will launch EVs in China in 2020 and will then sell them in the global market. In addition, Toyota has announced that it will set electrification grades for all vehicle models in 2025, and set hybrid grades also for RAV4 and Corolla models that were released/remodeled in the reporting year, taking initiatives for R&D and sale to popularize electrified vehicles. R&D expense for the automobile business in the reporting year was 1,083,873 (million yen), in which cutting-edge areas such as electrification, automated driving technology, and connected vehicles account for approximately 40%, and the said ratio is planned to increase to approximately 50% in the future. It was originally planned to streamline the areas other than the cutting-edge areas in order to maintain the total R&D expense at a certain level. However, on the assumption that a 10% increase in R&D expense in order to respond to the acceleration of electrification beyond expectation will result in a net cost increase, the sales ratio in Europe among the total global sales was calculated to be 11.2%, and the cost required to avoid penalties was estimated. 1,083,873 × (50-40)% × 11.2% ≒ 12,139 (million yen/year)

### **Comment**

The content of this matter includes statements concerning future prospects and is in accordance with decisions and assumptions based on the information currently obtained by Toyota. In light of the uncertainties inherent in decisions and assumptions along with the variability due to changes in future business operations and in internal and external conditions, the content may differ materially from Toyota's actual business performance, organizational structure and conditions in the future. Note that there are many factors having the above uncertainties and variability, and for general information on the variable factors, please refer to Toyota's annual securities report or annual report (Form 20-F) that was submitted to the U.S. Securities and Exchange Commission.

### **Identifier**

Risk 2

### **Where in the value chain does the risk driver occur?**

Downstream

### **Risk type & Primary climate-related risk driver**

|  |  |
| --- | --- |
| Emerging regulation | Mandates on and regulation of existing products and services |

### **Primary potential financial impact**

Other, please specify (Sales decline associated with a decrease in sales share due to the Zero Emission Vehicle Regulations)

### **Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

### **Company-specific description**

As a climate change policy, there are the ZEV regulations in the US and a move in Europe to ban the sale of vehicles other than ZEVs in some countries in the future; therefore, the tightening of regulations can become a risk for Toyota that sells vehicles in such countries. In particular in the UK, where Toyota sold 130,000 cars in the reporting year, it was announced that the sale of gasoline vehicles will be banned in 2035. Since the launch of its world’s first HV Prius in 1997, Toyota has gained the trust in environmental technology in countries/regions around the world, and regarding ZEVs, it has already released Mirai, an FCV, and will launch EVs in full scale in 2020 onward. However, there is a risk of a decrease in market share and an associated sales decrease if the demand cannot be met sufficiently in regions with the ZEV regulations.

### **Time horizon**

Medium-term

### **Likelihood**

Unlikely

### **Magnitude of impact**

Low

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

### **Potential financial impact figure (currency)**

25772000000

### **Potential financial impact figure – minimum (currency)**

<Not Applicable>

### **Potential financial impact figure – maximum (currency)**

<Not Applicable>

### **Explanation of financial impact figure**

In the UK, it was announced that the sale of gasoline vehicles including HVs will be banned in 2035. Although Toyota sold 130,000 vehicles in the UK in the reporting year, most of them are gasoline vehicles and HVs. Competitors announced one after another the plans for BEV development/product launch/production increase. If Toyota's ZEV launch is delayed, there is a risk that the sales will decrease due to a decline in sales volume and market share. On the assumption that the sales of 130,000 units (all of which are ICEs/HEVs) recorded in the UK in 2019 will become zero in 2035, the annual average value for 15 years is equivalent to -9,000 units/year (-6.9%/year). Compared to the sales of 3,138,755 (million yen) in Europe in the reporting year, the share in the UK among the total number of vehicles sold in Europe is equivalent to 11.9%, and the annual average of the sales decline was estimated. 3,138,755 (million yen) × 11.9% × 6.9%/year ≒25,772 (million yen/year)

### **Cost of response to risk**

1409000000

### **Description of response and explanation of cost calculation**

In the UK, it was announced that the sale of gasoline vehicles including HVs will be banned in 2035. Although Toyota sells 130,000 cars in the UK in the reporting year, most of them are gasoline vehicles and HVs. For this reason, it is a task to launch ZEVs that can gain share and to introduce them to the market. In order to address this task, Toyota is proceeding with the R&D of ZEVs. As specific actions to be anticipated, there are the resources shift to ZEV development, and R&D related to the development and capacity enhancement of major components such as batteries, e-axles, and FC stacks, and an associated cost increase is expected. As a result of such R&D initiatives, the sale of ZEVs allows the prevention of a decrease in market share with a corresponding sales decrease even if the sale of gasoline vehicles in the UK is banned in 2035. With regard to the specific launch plan of ZEVs, Toyota announced that it will start launching the EV models of C-HR and IZOA in China in 2020, and then sell EVs in the world market. R&D expense for the automobile business in the reporting year was 1,083,873 (million yen), in which cutting-edge areas such as electrification, automated driving technology, and connected vehicles account for approximately 40%, and the said ratio is planned to increase to approximately 50% in the future. It was originally planned to streamline the areas other than the cutting-edge areas in order to maintain the total R&D expense at a certain level. However, on the assumption that a 10% increase in R&D expense in order to respond to the acceleration of electrification beyond expectation will result in a net cost increase, the sales ratio in the UK among the total global sales was calculated to be 1.3%, and the cost required to respond to a sales decrease was estimated. 1,083,873 × (50-40)% × 1.3% ≒1,409 (million yen/year)

### **Comment**

When the ZEV regulations spread widely to each country, there is a risk, other than the risks of product share decrease and sales decrease, that R&D related to internal combustion engines and HVs, as well as CAPEX, will become stranded assets in the case where the production of vehicles with the existing internal combustion engines (ICE) and HVs decreases much more than expected due to the production shift that mainly focuses on ZEVs. However, the risk of ICE/HV-related facility becoming stranded assets is recognized to be limited because it is subject to the possibility of conversion to facilities for ZEV production and to the global ICE/HV market trends including the trends in countries without ZEV regulations. Regarding the response to the risk of becoming stranded assets, it is considered effective to work on the resources shift to ZEV development and the promotion of ZEV-related R&D as stated in the content of responses of this matter. The content of this matter includes statements concerning future prospects and is in accordance with decisions and assumptions based on the information currently obtained by Toyota. In light of the uncertainties inherent in decisions and assumptions along with the variability due to changes in future business operations and in internal and external conditions, the content may differ materially from Toyota's actual business performance, organizational structure and conditions in the future. Note that there are many factors having the above uncertainties and variability, and for general information on the variable factors, please refer to Toyota's annual securities report or annual report (Form 20-F) that was submitted to the U.S. Securities and Exchange Commission.

### **Identifier**

Risk 3

### **Where in the value chain does the risk driver occur?**

Upstream

### **Risk type & Primary climate-related risk driver**

|  |  |
| --- | --- |
| Acute physical | Increased severity and frequency of extreme weather events such as cyclones and floods |

### **Primary potential financial impact**

Decreased revenues due to reduced production capacity

### **Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

### **Company-specific description**

There are many production bases located in the Asian region, which is said to be at high risk of typhoons and floods: Toyota Motor Thailand Co., Ltd. (annual production volume of 570,000 units), which produces Corolla, Camry, etc. in Thailand; Toyota Kirloskar Motor Private Ltd. (annual production volume of 110,000 units), which produces Corolla, Innova, Fortuner,etc. in Indonesia; and PT. Toyota Motor Manufacturing Indonesia (annual production volume of 170,000 units), which produces Innova, Vios, Sienta, etc. In addition, since global suppliers are often located in Asia as well, there is a risk that production will be suspended globally, not just at the production bases in Asia, in the case where suppliers are damaged or a transportation route is damaged. As a past example, Toyota's plants remained undamaged during the flood in Thailand in 2011, but it was assumed that the flood led to the loss of production opportunities equivalent to 260,000 units globally due to damages to the suppliers. Although measures have been reinforced since 2011, it is possible that natural disasters associated with climate change will continue to disrupt the supply chain in the future and affect production.

### **Time horizon**

Medium-term

### **Likelihood**

Unlikely

### **Magnitude of impact**

High

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

### **Potential financial impact figure (currency)**

972157000000

### **Potential financial impact figure – minimum (currency)**

<Not Applicable>

### **Potential financial impact figure – maximum (currency)**

<Not Applicable>

### **Explanation of financial impact figure**

Typhoons or floods caused by climate change might damage the suppliers or disrupt transportation. Interrupted/suspended supply would lead to the suspension of production at global Toyota plants. It was estimated that there was a loss of production opportunities equivalent to 260,000 units during the flood in Thailand in 2011, which is approximately 3.5% of Toyota's global production at the time. As there were also earthquake damages in Japan in 2011, various measures, as stated below, have been taken since then to avoid the risk of supply chain disruption; therefore, even if a similar level of disaster occurs, it is anticipated that it will not cause the same level of damage. However, since it is anticipated that the frequency and damage of natural disasters will increase in the future due to the progress of climate change, it is assumed that damages similar to those in the past will be incurred, and the impact of disruption of the supply chain due to natural disasters was estimated by assuming it to affect 3.5% of the sales in the automobile business. As the sales in the automobile business were 27,775,932 million yen in the reporting year, the financial impact was calculated to be 972,157 million yen. 27,775,932 million yen × 0.035 ≒ 972,157 million yen

### **Cost of response to risk**

30000000

### **Description of response and explanation of cost calculation**

Many production factories and supplier factories are located in the Asian region, which is said to be at high risk of typhoons and floods, and there is a possibility that production will be suspended if the supply chain is disrupted due to a natural disaster. Therefore, it is a task to reduce the risk of supply chain disruption. The action to respond to this issue is positioned within the company-wide “Business Continuity Management (BCM).” In BCM, Toyota is working to promote "visualization of supply chain information" and "measures to prepare for disasters" during normal times. Toyota has been conducting analyses during normal times for risk avoidance and has been examining and implementing countermeasures, including introducing a database that grasps the damage status of suppliers as a “visualization of supply chain information” in Japan and carrying out regular training with suppliers in the event of a disaster. If there is the information of suppliers in this database, the information collection, which used to take about two weeks, can be reduced to about half a day. In overseas countries, similar initiatives are also being promoted in cooperation with suppliers in each country/region. Moreover, the Purchasing Group exchanges information with suppliers to consider the climate of each region and the characteristics of procurement routes, visualize disaster risk factors in each reg ion,, and examine countermeasures. In October of the reporting year, Japan suffered from a heavy rain caused by Typhoon No. 19, which left widespread damage in Japan, where many supplier factories are located. Toyota utilized the database, and held interviews with suppliers to fully understand the overall picture of the supply situation in real time. Fortunately, this heavy rain did not disrupt the procurement of parts, so the production was not suspended at Toyota's plants. Toyota has already implemented many measures against the effects of natural disasters on the supply chain. Even in selecting suppliers, many measures have been already taken, such as placing orders with multiple companies in consideration of geographical distribution not only for prices but also for alternative production in case of a disaster. As a measure cost, there is an annual maintenance cost of the database of Japan that is additionally incurred every year. (2.5 million yen/month × 12 months ≒ 30 million yen)

### **Comment**

Other production-related risks include rising energy costs brought by the introduction of renewable energy. Increasing the use of renewable energy in business has become a major business challenge, and Toyota has set a target to replace 25% of its electricity use with renewable energy by 2025. In contrast, renewable energy is often more expensive than the general system power in Japan and the Asian region. In addition, since the amount of supply is also limited, there is a possibility that supply will not catch up with further price increases and demand. Since it is unclear whether the government will support the introduction of renewable energy and the lowering of its prices, increasing the amount of renewable energy introduced by Toyota, which annually consumes approximately 8 million MWh of electricity globally, may possibly lead to increase energy costs. In order to address this risk, Toyota is promoting the initiatives for the reduction of renewable energy costs, such as entry into the renewable energy business, reduction of power consumption by thorough energy saving, and active purchase of low-cost renewable energy in Europe. As an initiative in Japan, where renewable energy is expensive, "Toyota Green Energy LLP" is to be established in 2020 or later in cooperation with Toyota Tsusho Corporation and Chubu Electric Power Co., Inc. to enter the renewable energy business, aiming to secure long-term, low-cost renewable energy. Moreover, Toyota will promote measures such as the procurement of low-priced, high-quality renewable energy certificates from an outside source. The content of this matter includes statements concerning future prospects and is in accordance with decisions and assumptions based on the information currently obtained by Toyota. In light of the uncertainties inherent in decisions and assumptions along with the variability due to changes in future business operations and in internal and external conditions, the content may differ materially from Toyota's actual business performance, organizational structure and conditions in the future. Note that there are many factors having the above uncertainties and variability, and for general information on the variable factors, please refer to Toyota's annual securities report or annual report (Form 20-F) that was submitted to the U.S. Securities and Exchange Commission.

## **C2.4**

### **(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

## **C2.4a**

### **(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**

### **Identifier**

Opp1

### **Where in the value chain does the opportunity occur?**

Downstream

### **Opportunity type**

Products and services

### **Primary climate-related opportunity driver**

Development and/or expansion of low emission goods and services

### **Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

### **Company-specific description**

Toyota sells its products worldwide. In the reporting year, Toyota recorded sales volume of 2.24 million units in Japan, 2.71 million units in North America, and 1.03 million units in Europe. Meanwhile, more countries/regions have been tightening or introducing auto fuel economy/emission regulations such as CAFÈ standards and ZEV programs in the US, and emission standards in the EU for their climate change policies. Toyota has won credibility in regards to environmental technology in countries/regions in the world since the world’s first HV Prius was launched on the market in 1997. Also, in the reporting year, Toyota announced that the goal aiming for the sales of more than 5.5 million electrified vehicles by 2030 is likely to be achieved about five years earlier. Not just complying with those regulations, this is a great business opportunity for Toyota to meet market demand of low-carbon vehicle. Toyota has a wider variety of low-carbon vehicle model lineups – Prius (PHV), Mirai (FCV) and AQUA (HV) – than its competitors. This is Toyota’s great advantage being able to draw more sales volume in the midst of rising market demand for low-emission vehicles which leads to increase in the revenues.

### **Time horizon**

Medium-term

### **Likelihood**

Likely

### **Magnitude of impact**

Medium-high

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

### **Potential financial impact figure (currency)**

188325000000

### **Potential financial impact figure – minimum (currency)**

<Not Applicable>

### **Potential financial impact figure – maximum (currency)**

<Not Applicable>

### **Explanation of financial impact figure**

Toyota has been building trust by selling vehicles with low emissions, including Prius, the world's first HEV, around the world up to now. For this reason, the tightening of regulations and preferential treatment associated with climate change, as well as changes in customer behavior such as customers' preferences for low-emission products, can become opportunities for Toyota to increase its sales. In order to estimate the financial impact of this opportunity, the sales increase is calculated by taking the situation in Europe as an example. In Europe, the number of vehicles sold and the market share have been increasing since 2015 due to the sales expansion of HVs. The number of vehicles sold, which was 874,000 units in 2015, increased (by 215,000 units) to 1.089 million units in 2019, achieving a 124.6% increase. Among them, the sales of HVs were increased (by 353,000 units) from 209,000 units to 562,000 units, and this large increase of 268.9% contributed to the increase in the total number of vehicles sold in Europe. It is assumed that Toyota's electrification strategy will continue to increase the number of vehicles sold in Europe by 6% annually against the sales in Europe of 3,138,755 (million yen). 3,138,755 (million yen) × 6% ≒ 188,325 (million yen)

### **Cost to realize opportunity**

156874000000

### **Strategy to realize opportunity and explanation of cost calculation**

Toyota has announced the Toyota Environmental Challenge 2050 as Toyota's long-term strategy and the 2030 Milestone as its medium-term strategy. Although Toyota has set a goal to sell more than 5.5 million electrified vehicles by 2030 in the 2030 Milestones, there was a task that the pace of introduction of EVs into the market was progressing at a faster pace than that. Therefore, in the reporting year, Toyota announced specific actions such as that the goal aiming to sell more than 5.5 million electrified vehicles by 2030 is expected to be achieved about five years earlier, that BEVs will be launched in China within 2020, and that a supply system and R&D will proceed for the batteries required for the said launch. This is based on the results of the analysis of fuel economy regulations and needs of the market in each country, as well as the results of R&D related to low-emission vehicles to meet the regulations and needs. In addition, Toyota is working to expand the use of electrified vehicles, such as that RAV4 and Corolla were remodeled in the reporting year with the electrification grades set. Consequently, it became possible to respond to the increasing demand for electric vehicles especially in Europe, resulting in that Toyota will obtain opportunities to increase its sales. Since an increase in market share by 2.7% that was attributed to the tightening of regulations and the preferential treatment, along with an accompanying sales increase, will be achieved by existing R&D, and thus any additional R&D is not assumed. However, in order to realize it, continuous development of electrified vehicles, capital investment, and purchased parts/production equipment are necessary, and these costs roughly correspond to the cost of products sold against the sales. The consolidated sales of the automobile business in the reporting year were 27,775,932 (million yen), while the cost of products sold was 23,143,209 (million yen), and the ratio of cost of products sold was approximately 83.3%. The cost of products sold corresponding to the sales increase in Europe (188,325 million yen) was calculated. 188,325 (million yen) × 83.3% ≒ 156,874 (million yen)

### **Comment**

Tightening of regulations and preferential treatment associated with climate change, as well as changes in customer behavior such as customers' preferences for low-emission products, not only provide Toyota with opportunities to increase its sales through an increase in vehicle sales but also provide an expectation of an income increase in the field of advanced electrification systems. This is because the demands from other companies for the sale of units and technical support regarding advanced electrification systems centering on HVs are increasing among other automakers that have difficulty in achieving standards set by regulations. In order to realize these opportunities, Toyota will make an investment in 2020 in BluE Nexus Corp., which was established in April 2019 by DENSO Corp. and Aisin Seiki Co., Ltd., both of which are Toyota’s group companies (the shareholding ratio after the investment: Toyota 10%; DENSO Corp. 45%; and Aisin Seiki Co., Ltd. 45%). Toyota will accelerate the prevalence of electrified vehicles by combining the strength of the both companies: Toyota’s control calibration technologies for engines, batteries, and other major peripheral components, as well as BluE Nexus's well-developed lineup of electric drive modules. The content of this matter includes statements concerning future prospects and is in accordance with decisions and assumptions based on the information currently obtained by Toyota. In light of the uncertainties inherent in decisions and assumptions along with the variability due to changes in future business operations and in internal and external conditions, the content may differ materially from Toyota's actual business performance, organizational structure and conditions in the future. Note that there are many factors having the above uncertainties and variability, and for general information on the variable factors, please refer to Toyota's annual securities report or annual report (Form 20-F) that was submitted to the U.S. Securities and Exchange Commission.

### **Identifier**

Opp2

### **Where in the value chain does the opportunity occur?**

Downstream

### **Opportunity type**

Products and services

### **Primary climate-related opportunity driver**

Development of new products or services through R&D and innovation

### **Primary potential financial impact**

Increased revenues through access to new and emerging markets

### **Company-specific description**

Since the launch of its world’s first HV Prius in 1997, Toyota has developed electrified vehicle technology and accumulated its working knowledge in areas such as batteries and motors ahead of its competitors. In addition, Toyota has produced more than 15 million batteries (nickel and lithium) in total. Toyota has introduced power feeding systems into many models (Prius, Crown, Sienta, etc.), which give Toyota more of an advantage in supply capacity against demand than its competitors. Also, Toyota is not only quality- and cost-competitive when it comes to electrified vehicle technology, such as batteries, motors, inverters, regenerative braking systems, and computerized software, but is also pursuing the development of next-generation technology including all-solid-state batteries. In recent years, typhoons, floods, and other natural disasters attributed to climate change have caused widespread power outages, which have increased the expectations of on-board batteries (EVs, HVs, PHVs, and FCVs) that are able to serve as a power source. Even in Japan, where Toyota’s head office is located, massive floods occur often. Also in the reporting year, massive flooding due to typhoons caused widespread power outages. At this time, electrified vehicles played a role as a power source, such as Mirai (FCV) and SORA (FC bus) that were used to support power supply to houses that had power outages. The need for securing emergency power systems has been increasing amid more frequent natural disasters, expanding business opportunities for Toyota to sell electrified vehicles with power feeding systems on board.

### **Time horizon**

Medium-term

### **Likelihood**

Likely

### **Magnitude of impact**

Low

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

### **Potential financial impact figure (currency)**

31463000000

### **Potential financial impact figure – minimum (currency)**

<Not Applicable>

### **Potential financial impact figure – maximum (currency)**

<Not Applicable>

### **Explanation of financial impact figure**

In Japan, the demand for household storage batteries has been growing, and the market, the size of which was about 2,000 units in 2011, has expanded to 115,000 units in 2019. Electrified vehicles with power feeding systems may progress as a substitute for household storage batteries, and there is a market of 54,000 storage batteries with a capacity of 6-10 kWh that may be potentially substituted by Toyota's Prius PHV with a battery capacity of 8.8 kWh. Since there is a possibility of outliers in the market size of a single year, it is assumed that there is a market size of 36,000 units as the average of the most recent three years, calculated as follows: (23,000 units in 2017 + 31,000 units in 2018 + 54,000 units in 2019 (23,000 + 31,000 + 54,000))/3=36,000 units. It is assumed that household storage batteries will be replaced by PHVs/EVs that can be charged and supply electricity. Among the PHVs/EVs that Toyota can currently sell in Japan, the vehicle that can be used as a substitute for household storage batteries is the Prius PHV, which accounts for about 27% of the PHVs/EVs sold in Japan (about 12,000 units out of about 44,000 units, as an actual figure in 2018). For this reason, with the assumption that there are 27% of sales opportunities out of 36,000 units, the financial impact was calculated from the price of Prius PHV (3,237 [thousand yen]). 36 (thousand units) × 0.27 × 3,237 (thousand yen) ≒ 31,463 (million yen)

### **Cost to realize opportunity**

26208000000

### **Strategy to realize opportunity and explanation of cost calculation**

The popularization of electrified vehicles is important not only for mitigation measures for climate change but also for the adaptation to it. Electrified vehicles can supply power to the outside, and models such as Prius, Prius PHV, Mirai, and SORA can supply 1,500 W of electricity. In Japan, which has Toyota’s head office and is also a major market, power outages due to typhoons and floods have been more frequent in recent years, and Typhoon No. 19 (Hagibis) that occurred in the reporting year also caused major power outages in Japan, making power supply be a task. At this time, Toyota, in response to the request from local governments, supported power supply to houses and public halls by using the Mirai (FCV), Prius PHV (PHV), and SORA (FC Bus) in Chiba Prefecture and other areas. Even after that, in preparation for future disasters, Toyota is collaborating with local governments, communities, dealers, etc. to examine a system that provides assistance during times of typhoons, floods, etc. and to promote the sale of its products based on the power supply functions. As a result, these initiatives are expected to lead to an increase in sales opportunities for electrified vehicles with power feeding systems. Since a sales increase of electrified vehicles with power feeding systems is realized by existing R&D and production equipment, any additional R&D or capital investment is not assumed. However, in order to realize it, continuous development of electrified vehicles, capital investment, and purchased parts/production equipment are necessary, and these costs roughly correspond to the cost of products sold against the sales. The consolidated sales of the automobile business in the reporting year were 27,775,932 (million yen), while the cost of products sold was 23,143,209 (million yen) and the ratio of cost of products sold was approximately 83.3%. The cost of products sold corresponding to the sales increase (31,463 million yen) of electrified vehicles in Japan that have power feeding systems was calculated. 31,463 (million yen) × 0.833 ≒ 26,208 (million yen)

### **Comment**

The content of this matter includes statements concerning future prospects and is in accordance with decisions and assumptions based on the information currently obtained by Toyota. In light of the uncertainties inherent in decisions and assumptions along with the variability due to changes in future business operations and in internal and external conditions, the content may differ materially from Toyota's actual business performance, organizational structure and conditions in the future. Note that there are many factors having the above uncertainties and variability, and for general information on the variable factors, please refer to Toyota's annual securities report or annual report (Form 20-F) that was submitted to the U.S. Securities and Exchange Commission.

### **Identifier**

Opp3

### **Where in the value chain does the opportunity occur?**

Direct operations

### **Opportunity type**

Resource efficiency

### **Primary climate-related opportunity driver**

Use of more efficient production and distribution processes

### **Primary potential financial impact**

Reduced indirect (operating) costs

### **Company-specific description**

Toyota has 50 plants all over the world, including Toyota Motor Thailand Co., Ltd. located in Thailand, a hot region, which produces Corolla and Camry, Toyota’s representative models (annual production volume of 570 thousand units), and the Limited Liability Company "TOYOTA MOTOR" in Saint-Petersburg, Russia, a cold region, which produces Camry and RAV4 (annual production volume of 80 thousand units). All of Toyota plants implement energy-saving and energy-generating activities aiming to make zero greenhouse gas emission from the plants to achieve the goal of Challenge 3 (Plant Zero CO2 Emissions) under the Toyota Environmental Challenge 2050. Such activities are expected to be able to create an opportunity to significantly reduce energy purchase cost at the plants.

### **Time horizon**

Medium-term

### **Likelihood**

Very likely

### **Magnitude of impact**

Low

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

### **Potential financial impact figure (currency)**

7023000000

### **Potential financial impact figure – minimum (currency)**

<Not Applicable>

### **Potential financial impact figure – maximum (currency)**

<Not Applicable>

### **Explanation of financial impact figure**

Toyota announced in the Toyota Environmental Challenge 2050 that it will work toward the Plant Zero CO2 Emissions Challenge. As the first specific measure, Toyota is taking initiatives for thorough energy conservation and reduction of energy used. These initiatives will lead to not only CO2 reduction but also energy cost reduction, which will then reduce the original costs of energy. Toyota was able to reduce the energy consumption per production unit by 0.51 GJ/unit (= 141.7 kWh/unit for three years) during the three years from 2015, in which it announced the Environmental Challenge 2050, to 2018. As the electricity accounts for the largest proportion of Toyota's energy composition, with the assumption that this reduction corresponds to the reduction of electricity, the calculated reduced annual cost for the total vehicle sales volume (8,958 thousand units) is as follows by using 16.6 yen/kWh (actual value in 2017 by Agency for Natural Resources and Energy) as Japan's industrial electricity charges, with which Toyota's head office functions and many factories are located. The financial impact was calculated on the assumption that opportunities for similar energy cost reduction will continue in the future. Note that since the actual power price is a contract item with a power company and cannot be disclosed, the price of general industrial electric power shown by the Agency for Natural Resources and Energy is used. 141.7 (kWh/unit) / 3 (years) × 8,958 (thousand units) × 16.6 yen/kWh ≒ 7,023 (million yen)

### **Cost to realize opportunity**

6523000000

### **Strategy to realize opportunity and explanation of cost calculation**

Toyota has set the Plant Zero CO2 Emissions Challenge as part of the Toyota Environmental Challenge 2050, and in order to achieve this, Toyota is promoting thorough energy conservation as well as the utilization of renewable energy and hydrogen. Regarding energy conservation, Toyota is also taking initiatives for the development and introduction of new low CO2 production technology as a response to the task of energy cost reduction. As a specific initiative, Toyota has developed a new type of paint atomizer (airless paint atomizer) that utilizes static electricity instead of air, to replace the conventional air paint atomizers that have been used in the vehicle body painting process. The airless paint atomizer employs the world's first new technology to improve the coating efficiency (ratio of the amount of paint actually adhered onto the vehicle body to the amount of paint sprayed) from approximately 60% to 70% of the conventional efficiency to over 95%, the highest value in the world. The introduction of airless paint atomizer is expected to reduce CO2 emissions by about 7% in Toyota Groups' painting process. In addition, since the collection device located at the bottom of the paint booth (the area where paint is sprayed) can be made more compact, it enables to make painting production lines more compact for the future. Through such initiatives, Toyota is expected to obtain the opportunities to reduce CO2 emissions and energy costs through energy conservation. Toyota's capital investment for global environmental conservation, including energy-saving activities, amounted to 75,400 million yen in 2016 and 63,000 million yen in 2017 (Environmental Report 2018). Toyota's non-consolidated capital investment was 294,500 million yen in FY2017 and 284,800 million yen in FY2018, with a ratio of 25.6% and 22.1%, respectively. With the assumption that an average of 23.8% of Toyota's non-consolidated capital investment is invested in environmental conservation, figures were replaced with that of the reporting year (274,100 million yen), and the legal durable years of 10 years for automobile manufacturing equipment was applied, followed by the calculation of the annual cost to realize this opportunity. 274,100 (million yen) × 23.8%/10 ≒ 6,523 (million yen)

### **Comment**

The content of this matter includes statements concerning future prospects and is in accordance with decisions and assumptions based on the information currently obtained by Toyota. In light of the uncertainties inherent in decisions and assumptions along with the variability due to changes in future business operations and in internal and external conditions, the content may differ materially from Toyota's actual business performance, organizational structure and conditions in the future. Note that there are many factors having the above uncertainties and variability, and for general information on the variable factors, please refer to Toyota's annual securities report or annual report (Form 20-F) that was submitted to the U.S. Securities and Exchange Commission.

## **C3. Business Strategy**

## **C3.1**

### **(C3.1) Have climate-related risks and opportunities influenced your organization’s strategy and/or financial planning?**

Yes

## **C3.1a**

### **(C3.1a) Does your organization use climate-related scenario analysis to inform its strategy?**

Yes, qualitative and quantitative

## **C3.1b**

### **(C3.1b) Provide details of your organization’s use of climate-related scenario analysis.**

|  |  |
| --- | --- |
| **Climate-related scenarios and models applied** | **Details** |
| 2DS  IEA B2DS  IEA NPS  Other, please specify (MoMo) | ■Coverage of scenario analysis/Time horizon/Adopted scenarios/Inputs/Hypothesis/Analytical method The change in the size of powertrain market, which affects potential trends in the auto market, is crucial for Toyota, constituting transition risks. Therefore, this analysis covers the production of passenger vehicles, our core business. Based on the IEA Mobility Model (MoMo), NPS, 2DS, and B2SD have been identified as transition scenarios that can be used to analyze the size of the powertrain market. Quantitative analysis was adopted as an analysis method. Toyota looked at the worldwide sales volume and sales ratio by powertrain in each scenario, and compared them as inputs with the “2030 Milestone” targets, the 2030 interim target of the “Toyota Environmental Challenge 2050.” Thus, the set time horizon was 2030. Toyota assumed that as the used scenario shifts from NPS, to 2DS and B2DS that temperature rises are smaller, tightening of regulations, technology evolution, and trends in the mobility business such as ride-sharing will be accelerated. ■A summary of the scenario analysis results In all scenarios of NPS, 2DS, and B2DS, the market for new passenger vehicles has an expanding trend. The ZEV ratio target Toyota strategically set exceeds the ratio needed to achieve 2DS, yet falls below the ratio needed to achieve 2BDS. Toyota is, however, on track to establish its business base of mass production for electrified vehicles, acquiring the essential technologies through HV development. The technology is also applicable to ZEV development so that Toyota is able to develop by adjusting the powertrain lineups to match any shifts in demand flexibly and strategically. In terms of the change in business models, for example, the expansion of sharing businesses increases the utilization rate of vehicles compared to that of privately-owned vehicles, which in turn potentially enhances the effect of electrified vehicles on CO2 reductions, thereby expanding Toyota’s business opportunity. ■How the results have informed our business objectives and strategy The scenario analysis was used to review the business goals and strategy that had already been established based on the climate agenda and its future forecast. It also aimed to examine a sales target of electrified vehicles and CO2 emissions reduction targets of new vehicles under the “Environmental Action Plan”, which will be released in 2020. Based on Toyota’s announcement in the reporting year that it would likely achieve this sales target 5 years earlier than planned, it confirmed that the business goals/strategy were appropriate, requiring no revision. Toyota also confirmed their consistency with the new mobility business that it has been promoting, including the investment in Uber with partners to develop a self-driving and ride-sharing business. ■A case study In 2020 the “6th Toyota Environmental Action Plan”, the current goal, will come to an end, and the “7th Toyota Environmental Action Plan” needs to be announced. In light of this, Toyota reviewed its business objectives and strategy during this reporting year. A task was to develop a sales target of electrified vehicles, CO2 emissions reduction targets of new vehicles, and others in line with the 2030 Milestone targets. Through the analysis, which also paid attention to their relations with climate scenarios, Toyota confirmed that the business objectives and strategy were consistent with the analysis results. This includes realistic CO2 emissions reduction targets, which reflect the utilization rate of electrified vehicles, and objectives to include HV models into all product lineups and to have more than 10 models of Battery Electric Vehicle (BEV) lineups. Based on the scenario analysis, Toyota confirmed that the validity of defined goals, such as the sales target of electrified vehicles, has become greater and no revision is required on the sales ratio of electrified vehicles presumed in the 2030 Milestone. |

## **C3.1d**

### **(C3.1d) Describe where and how climate-related risks and opportunities have influenced your strategy.**

|  |  |  |
| --- | --- | --- |
|  | **Have climate-related risks and opportunities influenced your strategy in this area?** | **Description of influence** |
| Products and services | Yes | [How the strategy in this area has been influenced by climate-related risks and opportunities and the time horizon(s)] Social movement for decarbonization, translated into fuel economy standards and others, has had a great impact on Toyota’s product development and production. In light of this, Toyota announced in 2015 the Toyota Environmental Challenge 2050, which includes the CO2 reduction plan. In the Challenge, Toyota has presented its long-term greenhouse gas emission reduction strategy, and identified the following points in relation to its products. Challenge 1) Reduce global average CO2 emissions during operation from new vehicles by 90% from Toyota’s 2010 global level Toyota also developed and announced in 2017 the 2030 Milestone, an interim target to be achieved by 2030, which aims for sales of more than 5.5 million electrified vehicles in 2030. Further, in 2020 it made public the 7th Environmental Action Plan, a short-term strategy targeting 2025. [A case study of the most substantial strategic decision(s) made] Demand for low emission vehicles has been rising in response to tightening vehicle/fuel economy regulations, such as the ZEV program and the CAFE standards in the US as well as the ban of sales of gasoline/diesel vehicles in some countries in Europe and elsewhere. Under such circumstances, it is necessary to produce/sell electrified vehicles in line with market needs and regulations. Accordingly, Toyota made a business decision in 2017 to develop a mid-term strategy, aiming for sales of more than 5.5 million electrified vehicles in 2030. In this reporting year, given that the demand for electrified vehicles exceeds its initial projection, the Board of Directors made a strategic decision that it would achieve this sales target 5 years earlier than initially planned, and launch the sales of BEV worldwide, starting with the Chinese market in 2020. Later, this decision was made public by the Executive Vice President. The electrification of vehicle models has been progressing accordingly, and Toyota sells the electrification grades including Corolla and RAV4, which underwent model changes in the reporting year. |
| Supply chain and/or value chain | Yes | [How the strategy in this area has been influenced by climate-related risks and opportunities and the time horizon(s)] The production/sales of automobiles emits a large amount of CO2 throughout its value chain, which is not limited at the production stage. Therefore, social movement for decarbonization, translated into various risks and opportunities on the value chain, has an impact on the Toyota’s business strategy. To be specific, the Toyota Environmental Challenge 2050 identifies the following points in relation to the entire value chain. Challenge 2) Completely eliminate all CO2 emissions from the entire vehicle life cycle Toyota also developed and announced in 2017 the 2030 Milestone, an interim target by 2030, which defines sales of more than 5.5 million electrified vehicles in 2030 as a business strategy. The production of electrified vehicles poses different risks and opportunities from conventional vehicles in terms of collaboration with suppliers and recycling. This includes production and disposal of butteries. Reflecting these aspects above, the 2030 strategy was developed. [A case study of the most substantial strategic decision made] Demand for low emission vehicles has been rising in response to tightening vehicle/fuel economy regulations, such as the ZEV program and the CAFE standards in the US as well as the ban of sales of gasoline/diesel vehicles in some countries in Europe and elsewhere. Toyota has been promoting the electrification of vehicles accordingly. An issue relating to the value chain of electrified vehicles is the development and procurement of batteries. Thus, it is important to promote research and development activities, collaboration with battery manufacturers, and recycling. Based on this understanding, in this reporting year, Toyota announced establishment of a battery procurement system as a strategic decision to promote electrified vehicles. It also announced that, in line with this decision, Toyota has been working for the establishment of a new company jointly with Panasonic, and the organization of a battery procurement system to promote electrified vehicles in cooperation and collaboration with CATL, BYD, GS Yuasa, Toshiba, and Toyota Industries Corporation. Toyota anticipates that these endeavors will mitigate risks hindering the stable supply of batteries essential to the promotion of electrified vehicles. |
| Investment in R&D | Yes | [How the strategy in this area has been influenced by climate-related risks and opportunities and the time horizon(s)] Tightening regulations in response to climate change and change in consumer needs has required Toyota to accelerate its research and development endeavors to meet the standards. This has an impact on Toyota’s strategy: an increase in investment in R&D and the promotion of R&D in electrified vehicles. To be specific, the 2030 Milestone aims for sales of more than 5.5 million electrified vehicles in 2030 and Toyota announced in the reporting year that it would achieve this goal 5 years earlier than planned. Research and development of electrified vehicles needs to be implemented to achieve this objective. [A case study of the most substantial strategic decision made] In the reporting year, Toyota announced that it would achieve the target to sell more than 5.5 million electrified vehicles in 2030, which is specified under the 2030 Milestone, 5 years earlier than planned. To undertake mass production/sales of electrified vehicles, Toyota needs to promote the designing/development of electric vehicles, and their platform and related parts. In response, it has increased an investment in R&D and promoted their development in collaboration with other companies that have relevant technical know-how. In line with this, Toyota announced its strategic decision to establish a research and development company of electrified vehicles jointly with BYD, which offers total energy solutions including electrified vehicles and large rechargeable batteries. It also announced that Toyota will make a 50% investment in the company. This initiative is expected to accelerate the designing/development of electrified vehicles. |
| Operations | Yes | [How the strategy in this area has been influenced by climate-related risks and opportunities and the time horizon(s)] In an auto production business, which is Toyota’s core business, the production process emits a large volume of CO2. Therefore, social movement for decarbonization is translated into various risks and opportunities on business operation: the imposition of carbon tax, carbon pricing, and the volume of renewable energy and hydrogen to be introduced and their price. They have an impact on Toyota’s business strategies. Reflecting the climate-related risks/opportunities mentioned above, Toyota has presented its long-term greenhouse gas emission reduction strategy, and identified the following points in relation to its business operations in the Toyota Environmental Challenge 2050. Challenge 3) Achieve zero CO2 emissions at all plants by 2050 In relation to these targets, Toyota also developed and announced in 2017 the 2030 Milestone, an interim target to be achieved by 2030. [A case study of the most substantial strategic decision(s) made] The use of electricity from renewable sources expands globally and the discussions on carbon pricing such as a carbon tax, etc. continues. Under this circumstance, Toyota sees the reduction of CO2 emitted from operation processes at plants as an important issue to be addressed for its business. In the reporting year, Toyota decided on the introduction of compact water electrolysis-based hydrogen generation and filling appliances, “SimpleFuel”, in Motomachi Plant in Toyota City, Aichi. And it was actually introduced later. These appliances generate, store, and supply hydrogen by making use of electricity generated by solar power, which is renewable energy. As a result, at the plant, forklifts are operated with the use of CO2-free hydrogen, whereby the CO2 emission volume is expected to reduce. The most recent action taken by Toyota was the joint establishment of Toyota Green Energy with Chubu Electric Power Co. Inc. and Toyota Tsusho Corporation in April 2020. The company will engage in a renewable power generation business, acquiring and operating domestic power sources to generate renewable energy with the objective to supply power to the Toyota Group in the future. As described above, Toyota has been working for the development of renewable energy and the expansion of their use. |

## **C3.1e**

### **(C3.1e) Describe where and how climate-related risks and opportunities have influenced your financial planning.**

|  |  |  |
| --- | --- | --- |
|  | **Financial planning elements that have been influenced** | **Description of influence** |
| Row 1 | Revenues  Direct costs  Assets | (1) Impact on revenue [A case study of how climate-related risks and opportunities have influenced our financial planning] Toyota’s revenue are affected by the rising demand for low emission vehicles caused by tightening of climate-minded fuel economy regulations. Toyota sells its products worldwide. In the reporting year, Toyota recorded sales volume of 2.24 million units in Japan, 2.71 million units in North America, and 1.03 million units in Europe. Meanwhile, more countries/regions have been tightening or introducing fuel economy/emission regulations as part of climate change policy, such as CAFE standards and ZEV programs in the US, and emission standards in the EU. Under such circumstances, demand for low emission vehicles has been rising. This has increased Toyota’s sales volume and sales amount of low emission vehicles. Specifically, the strong sales of HVs in Europe increased Toyota’s sales volume by 35,000 units on a consolidated basis from the previous year. As a result, Toyota’s sales amount from products increased by 122 billion yen (up 3.8%). Taking such past experiences into account, Toyota analyzed growing business opportunities from the rising demand for low emission vehicles attributed to tightening regulations, and, subsequently, launched new low emission vehicles and carried out model changes. Toyota carries out financial planning, reflecting such impacts on its sales. [The time horizon covered by the financial planning of the element selected] Toyota announced that it aimed for sales of a total of more than 30 million electrified vehicles by 2025, more than 15 million of which have been sold to date. Based on this, a sales plan is prepared. Toyota had initially aimed for sale of more than 5.5 million electrified vehicles in one year; that is, 2030. However, it announced that it would achieve this goal 5 years earlier than planned, given that the yearly sales exceeded expectations in the reporting year. A sales plan is developed, taking this into account. (2) Impact on direct cost [A case study of how climate-related risks and opportunities have influenced our financial planning] Society demands the reduction of CO2 emission as climate action advances. It is, therefore, necessary to reduce CO2 emitted from production processes. Under this circumstance, Toyota identifies the “Challenge 3: Achieve zero CO2 emissions at all plants” under the Toyota Environmental Challenge 2050, promoting the reduction of CO2 emitted from production processes. To be specific, Toyota thoroughly promotes energy-saving measures, and the use of renewable energy and hydrogen. The promotion of energy-saving initiatives requires investments, but also contributes to energy cost reductions. This endeavor for cost reductions partially impacts the financial planning. The use of renewable energy and hydrogen increases cost due to the purchase of renewable energy certificates and others. Therefore, Toyota needs to take a careful approach to minimize cost increase while working to achieve targets. The energy-related cost is comprehensively examined, which impacts direct cost related to the financial planning. By reflecting cost associated with energy-saving measures and the use of renewable energy and hydrogen in a cost plan, measures to reduce CO2 emissions at plants will be properly implemented. [The time horizon covered by the financial planning of the element selected] Toyota sets the goal to increase the use of electricity from renewable sources to 25% of its entire power consumption by 2025. To this end, it has been promoting the reduction of power consumption by implementing energy-saving measures, and working for the procurement of electricity from renewable sources at low cost. In view of the above efforts, it impacts direct cost with the implication on financial plans. (3) Impact on assets [A case study of how climate-related risks and opportunities have influenced our financial planning] Toyota aims to increase the ratio of renewable energy in its total energy consumption, identifying the “Challenge 3: Achieve zero CO2 emissions at all plants” under the Toyota Environmental Challenge 2050, a long-term strategy. However, electricity from renewable sources is more expensive than that supplied through a conventional grid system in many regions, including Japan, where many offices that function as headquarters and plants are situated. Therefore, increasing the procurement volume of electricity from renewable sources involves the risk of higher sales cost. Further, since demand for renewable energy is increasing in Japan, it is uncertain that Toyota will be able to secure the sufficient volume of supply to satisfy its demand. Toyota needs to work for the procurement of a sufficient volume of renewable energy at low cost over the long period of time. As a specific response to the task, Toyota has entered the renewable energy business and announced the joint establishment of Toyota Green Energy with Toyota Tsusho Corporation, a member of Toyota Group, and Chubu Electric Power Co. Inc., a major electric power company, aiming to achieve zero CO2 emissions at all plants. Toyota Green Energy plans to acquire and operate power sources to generate renewable energy in Japan, and to supply electricity from renewable sources to the Toyota Group in the future. Through this endeavor, Toyota aims to secure the sufficient volume of electricity from renewable sources for its use at low cost in the long run. Toyota announced that it will contribute an investment stake of 50% to Toyota Green Energy. As per the financial impact, the invested amount will influence the financial planning. [The time horizon covered by the financial planning of the element selected] Toyota Green Energy plans to be established in July 2020, in which Toyota will make an investment in 2020. Toyota anticipates mid- and long-term returns from the renewable energy business, and aims to achieve zero CO2 emissions at all plants by receiving electricity from renewable sources from the company. |

## **C3.1f**

### **(C3.1f) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).**

## **C4. Targets and performance**

## **C4.1**

### **(C4.1) Did you have an emissions target that was active in the reporting year?**

Both absolute and intensity targets

## **C4.1a**

### **(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.**

### **Target reference number**

Abs 1

### **Year target was set**

2015

### **Target coverage**

Business division

### **Scope(s) (or Scope 3 category)**

Scope 1+2 (market-based)

### **Base year**

2013

### **Covered emissions in base year (metric tons CO2e)**

6035000

### **Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)**

100

### **Target year**

2050

### **Targeted reduction from base year (%)**

100

### **Covered emissions in target year (metric tons CO2e) [auto-calculated]**

0

### **Covered emissions in reporting year (metric tons CO2e)**

5683661

### **% of target achieved [auto-calculated]**

5.82169014084507

### **Target status in reporting year**

Underway

### **Is this a science-based target?**

No, but we anticipate setting one in the next 2 years

### **Please explain (including target coverage)**

The Plant Zero CO2 Emissions Challenge, one of the Toyota Environmental Challenge 2050 programs in which Toyota aims to reduce CO2 emissions to zero during the production of cars, covers the global plants of consolidated production companies (Starting from this year, the scope of data disclosure is defined in more detail). In order to achieve the Challenge's targets, Toyota will work to introduce innovative technology and renewable energy and use hydrogen effectively. First, manufacturing processes will be simplified and streamlined to shorten the time required for production as well as improve the efficiency of energy use mainly through the optimization of equipment and the utilization of waste heat. Then, we will reduce CO2 emissions using all possible means such as introducing "karakuri" that does not require any energy use. We will also effectively use hydrogen energy and renewable energy (e.g. photovoltaic and wind power generation), and work with stakeholders to establish the social systems needed to spread these kinds of energy.

### **Target reference number**

Abs 2

### **Year target was set**

2018

### **Target coverage**

Business division

### **Scope(s) (or Scope 3 category)**

Scope 1+2 (market-based)

### **Base year**

2013

### **Covered emissions in base year (metric tons CO2e)**

6035000

### **Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)**

100

### **Target year**

2030

### **Targeted reduction from base year (%)**

35

### **Covered emissions in target year (metric tons CO2e) [auto-calculated]**

3922750

### **Covered emissions in reporting year (metric tons CO2e)**

5683661

### **% of target achieved [auto-calculated]**

16.6334004024145

### **Target status in reporting year**

Underway

### **Is this a science-based target?**

No, but we anticipate setting one in the next 2 years

### **Please explain (including target coverage)**

This target indicates what the Plant Zero CO2 Emissions Challenge (Abs1), one of the challenges of the Toyota Environmental Challenge 2050 in which Toyota aims to reduce CO2 emissions to zero during the production of cars, to be achieved by 2030. It covers the global plants of consolidated production companies (Starting from this year, the scope of data disclosure is defined in more detail).

### **Target reference number**

Abs 3

### **Year target was set**

2020

### **Target coverage**

Business division

### **Scope(s) (or Scope 3 category)**

Scope 1+2 (market-based)

### **Base year**

2013

### **Covered emissions in base year (metric tons CO2e)**

6035000

### **Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)**

100

### **Target year**

2025

### **Targeted reduction from base year (%)**

30

### **Covered emissions in target year (metric tons CO2e) [auto-calculated]**

4224500

### **Covered emissions in reporting year (metric tons CO2e)**

5683661

### **% of target achieved [auto-calculated]**

19.4056338028169

### **Target status in reporting year**

New

### **Is this a science-based target?**

No, but we anticipate setting one in the next 2 years

### **Please explain (including target coverage)**

This is one of the targets for 2025 (Seventh Toyota Environmental Action Plan), which are included in the new five-year implementation plan aimed at achieving the Plant Zero CO2 Emissions Challenge (Abs1), one of the challenges of the Toyota Environmental Challenge 2050 in which Toyota aims to reduce CO2 emissions to zero during the production of cars. It covers the global plants of consolidated production companies (Starting from this year, the scope of data disclosure is defined in more detail).

### **Target reference number**

Abs 4

### **Year target was set**

2016

### **Target coverage**

Business division

### **Scope(s) (or Scope 3 category)**

Scope 1+2 (location-based)

### **Base year**

1990

### **Covered emissions in base year (metric tons CO2e)**

2110000

### **Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)**

15

### **Target year**

2020

### **Targeted reduction from base year (%)**

28

### **Covered emissions in target year (metric tons CO2e) [auto-calculated]**

1519200

### **Covered emissions in reporting year (metric tons CO2e)**

1071185

### **% of target achieved [auto-calculated]**

175.83192281652

### **Target status in reporting year**

Underway

### **Is this a science-based target?**

No, but we anticipate setting one in the next 2 years

### **Please explain (including target coverage)**

This is one of the targets included in the Sixth Toyota Environmental Action Plan, which stipulates specific implementation plans and targets for each five-year period. It is a target for production activities at the major business sites of 12 TMC plants. These plants have already achieved the target and are making efforts for further reductions.

## **C4.1b**

### **(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).**

### **Target reference number**

Int 1

### **Year target was set**

2016

### **Target coverage**

Business division

### **Scope(s) (or Scope 3 category)**

Scope 1+2 (location-based)

### **Intensity metric**

Metric tons CO2e per unit of production

### **Base year**

2001

### **Intensity figure in base year (metric tons CO2e per unit of activity)**

0.933

### **% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure**

100

### **Target year**

2020

### **Targeted reduction from base year (%)**

39

### **Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]**

0.56913

### **% change anticipated in absolute Scope 1+2 emissions**

-0.4

### **% change anticipated in absolute Scope 3 emissions**

0

### **Intensity figure in reporting year (metric tons CO2e per unit of activity)**

0.556

### **% of target achieved [auto-calculated]**

103.608431582708

### **Target status in reporting year**

Underway

### **Is this a science-based target?**

No, but we anticipate setting one in the next 2 years

### **Please explain (including target coverage)**

This is one of the targets included in the Sixth Toyota Environmental Action Plan, which stipulates specific implementation plans and targets for each five-year period. It is an intensity target per unit production for the global plants of consolidated production companies. The denominator for unit production represents the number of cars produced.

## **C4.2**

### **(C4.2) Did you have any other climate-related targets that were active in the reporting year?**

Target(s) to increase low-carbon energy consumption or production

## **C4.2a**

### **(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.**

### **Target reference number**

Low 1

### **Year target was set**

2020

### **Target coverage**

Business division

### **Target type: absolute or intensity**

Absolute

### **Target type: energy carrier**

Electricity

### **Target type: activity**

Production

### **Target type: energy source**

Renewable energy source(s) only

### **Metric (target numerator if reporting an intensity target)**

Percentage

### **Target denominator (intensity targets only)**

<Not Applicable>

### **Base year**

2018

### **Figure or percentage in base year**

4.5

### **Target year**

2025

### **Figure or percentage in target year**

25

### **Figure or percentage in reporting year**

11.5

### **% of target achieved [auto-calculated]**

34.1463414634146

### **Target status in reporting year**

New

### **Is this target part of an emissions target?**

Yes, this is part of Asb1, Asb2, and Asb3.

### **Is this target part of an overarching initiative?**

No, it's not part of an overarching initiative

### **Please explain (including target coverage)**

This is one of the targets for 2025 (Seventh Toyota Environmental Action Plan), which are included in the new five-year implementation plan aimed at achieving the Plant Zero CO2 Emissions Challenge (Abs1), one of the challenges of the Toyota Environmental Challenge 2050 in which Toyota aims to reduce CO2 emissions to zero during the production of cars. It covers the global plants of consolidated production companies.

## **C4.3**

### **(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

Yes

## **C4.3a**

### **(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

|  |  |  |
| --- | --- | --- |
|  | **Number of initiatives** | **Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked \*)** |
| Under investigation | 0 | 0 |
| To be implemented\* | 4 | 112700 |
| Implementation commenced\* | 0 | 0 |
| Implemented\* | 3 | 72194 |
| Not to be implemented | 0 | 0 |

## **C4.3b**

### **(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.**

### **Initiative category & Initiative type**

|  |  |
| --- | --- |
| Energy efficiency in production processes | Process optimization |

### **Estimated annual CO2e savings (metric tonnes CO2e)**

65446

### **Scope(s)**

Scope 1

Scope 2 (location-based)

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

### **Annual monetary savings (unit currency – as specified in C0.4)**

2080000

### **Investment required (unit currency – as specified in C0.4)**

5990000000

### **Payback period**

4-10 years

### **Estimated lifetime of the initiative**

<1 year

### **Comment**

This indicates the amount of CO2 emissions reduced as a result of innovative technology introduced, and daily improvement activities promoted, to reduce CO2 emissions from productive operations. Energy conservation effects were obtained by introducing a wider range of innovative technology mainly in the painting process and using less steam and air and more LED lighting. Toyota is developing hydrogen burners to enable decarbonization of the combustion process at plants, using FC forklifts for a wider range of operations, and installing generators that employ hydrogen fuel to test and evaluate their performance. In addition to efforts at its plants, Toyota contributes to creating a decarbonized society by joining initiatives to create systems in which hydrogen energy is utilized by society as a whole, including the Hydrogen Utilization Study Group in Chubu.

### **Initiative category & Initiative type**

|  |  |
| --- | --- |
| Low-carbon energy consumption | Wind |

### **Estimated annual CO2e savings (metric tonnes CO2e)**

6748

### **Scope(s)**

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

### **Annual monetary savings (unit currency – as specified in C0.4)**

214592

### **Investment required (unit currency – as specified in C0.4)**

2090000000

### **Payback period**

4-10 years

### **Estimated lifetime of the initiative**

1-2 years

### **Comment**

Toyota is working to introduce renewable energy, taking into consideration the characteristics of the countries and regions where it operates. Currently, as typified by the construction of a wind power plant (21.5 MW) at the Tahara Plant in Japan, it is actively promoting the introduction of power generation equipment using renewable energy at its plants in particular. It has achieved the introduction of 100% renewable energy at all of its European plants and four South American plants, as well as for the production of MIRAI in Japan.

## **C4.3c**

### **(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

|  |  |
| --- | --- |
| **Method** | **Comment** |
| Dedicated budget for energy efficiency | Each year, Toyota constantly makes large investments and pays high maintenance costs not only to reduce the amount of energy consumed, but also to push all kinds of environmental initiatives (e.g. the development of energy-saving products and the recycling and recovery of products). |

## **C4.5**

### **(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?**

Yes

## **C4.5a**

### **(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.**

### **Level of aggregation**

Company-wide

### **Description of product/Group of products**

Toyota launched the world first mass-produced HV Prius in 1997 under its philosophy that "environmental contributions will only happen with higher product availability." Since then, Toyota has expanded its HV lineups. Toyota sold 48 models in the reporting year. Toyota sold 1.92 million units in the reporting year alone, and 15.01 million units on a global cumulative basis. Toyota's HVs feature electrically-powered driving, energy regeneration at the time of idle stop deceleration, highly efficient gasoline engine recycling synergized by electrification, control systems that realize the highest efficiency in response to drivers' different ways of driving, and more. Also, Toyota's HVs also have various environmental technologies such as To decreasing car body’s air resistance and /tire’s rolling resistance, Toyota's HVs enhanced air conditioning efficiency, which (which is not claimed in the product catalogs), reducing lighting electricity consumption, and are equipped with monitors, which allow customers to enjoy eco-driving. Prius PHV launched in 2012 has a large-capacity battery and an external charging system developed based on the Toyota HV system, which enables customers to enjoy long-distance EV driving without concerns about the batteries running down. This feature also promises deeper market penetration and lower emissions toward a renewable energy-dominant future. Toyota also launched MIRAI, the world first mass-produced FCV, in 2014, and achieved 2476 sales units by the reporting year. Toyota intends to make it more available to customers. FCVs, which realize zero emissions while on the road, have the potential to lead to a future low carbon society because hydrogen can replace unstable renewables and can also be stored/transported easily. Toyota will globally launch the world mass-produced EV models in 2020 starting with sales in China. Toyota will expand the lineups of electric vehicle gradually and increase more than 10 models in the first half of 2020.

### **Are these low-carbon product(s) or do they enable avoided emissions?**

Low-carbon product

### **Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Other, please specify (Toyota define the low-carbon product as called electric vehicle.)

### **% revenue from low carbon product(s) in the reporting year**

19.8

### **% of total portfolio value**

<Not Applicable>

### **Asset classes/ product types**

<Not Applicable>

### **Comment**

Toyota calculates the effect of CO2 emission reductions by comparing real-world CO2 emissions from HVs to those from comparable gasoline-powered vehicles. Global cumulative HV sales reached 15.01million units in this reporting year (2019), which reduced CO2 emissions by 121 million tons, in other words, gasoline consumption by 45million kl.

## **C5. Emissions methodology**

## **C5.1**

### **(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).**

### **Scope 1**

### **Base year start**

April 1 2013

### **Base year end**

March 31 2014

### **Base year emissions (metric tons CO2e)**

2094000

### **Comment**

### **Scope 2 (location-based)**

### **Base year start**

April 1 2013

### **Base year end**

March 31 2014

### **Base year emissions (metric tons CO2e)**

4126000

### **Comment**

### **Scope 2 (market-based)**

### **Base year start**

April 1 2013

### **Base year end**

March 31 2014

### **Base year emissions (metric tons CO2e)**

3941000

### **Comment**

Toyota is in the preparation process of collecting supplier-specific emission factors from power companies. Therefore, we use location-based emission factors in calculation in case the supplier does not disclose their emission factors.

## **C5.2**

### **(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.**

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

## **C6. Emissions data**

## **C6.1**

### **(C6.1) What were your organization’s gross global Scope 1 emissions in metric tons CO2e?**

### **Reporting year**

### **Gross global Scope 1 emissions (metric tons CO2e)**

1904119

### **Start date**

January 1 2019

### **End date**

December 31 2019

### **Comment**

Starting from this year, the scope of data disclosure is defined in more detail. The management method is changed from fiscal- to calendar-year management.

### **Past year 1**

### **Gross global Scope 1 emissions (metric tons CO2e)**

### **Start date**

### **End date**

### **Comment**

## **C6.2**

### **(C6.2) Describe your organization’s approach to reporting Scope 2 emissions.**

### **Row 1**

### **​Scope 2, location-based​**

We are reporting a Scope 2, location-based figure

### **Scope 2, market-based**

We are reporting a Scope 2, market-based figure

### **Comment**

Toyota is in the preparation process of collecting supplier-specific emission factors from power companies. As for the marked-based emissions, we use location-based emission factors in calculation in case the supplier does not disclose their emission factors.

## **C6.3**

### **(C6.3) What were your organization’s gross global Scope 2 emissions in metric tons CO2e?**

### **Reporting year**

### **Scope 2, location-based**

4244743

### **Scope 2, market-based (if applicable)**

3779542

### **Start date**

January 1 2019

### **End date**

December 31 2019

### **Comment**

Starting from this year, the scope of data disclosure is defined in more detail. The management method is changed from fiscal- to calendar-year management.

### **Past year 1**

### **Scope 2, location-based**

### **Scope 2, market-based (if applicable)**

### **Start date**

### **End date**

### **Comment**

## **C6.4**

### **(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

No

## **C6.5**

### **(C6.5) Account for your organization’s gross global Scope 3 emissions, disclosing and explaining any exclusions.**

### **Purchased goods and services**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

65100000

### **Emissions calculation methodology**

1) CO2 emissions from production of purchased products is calculated by multiplying the number of units sold by CO2 emissions from the stage of materials and parts production per unit, which is calculated through a Life Cycle Assessment for each car model. (The CO2 emissions per unit are sourced from the Life Cycle Assessment Society of Japan (JLCA) and GaBi software.) 2)CO2 emissions from production of secondary materials used in a manufacturing process is calculated by multiplying the monetary amount of purchased secondary materials by CO2 emissions per unit. The CO2 emissions per unit are defined by Japanese Ministry of Environment (MOE) “The Data Base of the Factors for Calculation of Organizations' GHG Emission from Supply Chain Ver.3.0”. 3)CO2 emissions from test car development is calculated by multiplying the number of test cars produced by CO2 emissions per unit. (The CO2 emissions per unit are sourced from the Life Cycle Assessment Society of Japan (JLCA) and GaBi software.)

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

### **Please explain**

### **Capital goods**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

4230000

### **Emissions calculation methodology**

Calculated by multiplying the amount spent in capital investment by the CO2 emissions per unit. The emissions per unit are sourced from Japanese Ministry of Environment “The Data Base of the Factors for Calculation of Organizations' GHG Emission from Supply Chain Ver.3.0”.

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

### **Please explain**

### **Fuel-and-energy-related activities (not included in Scope 1 or 2)**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

960000

### **Emissions calculation methodology**

Calculated by multiplying Scope 1 & 2 by CO2 emissions per unit. The CO2 emissions per unit are sourced from Japan Environmental Management Association for Industry and the Law on Promotion of Global Warming Countermeasures “GHG Emissions Accounting and Reporting Manual Ver.4.4”.

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

### **Please explain**

### **Upstream transportation and distribution**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

910000

### **Emissions calculation methodology**

Calculated by multiplying the number of sales units by CO2 emissions generated during upstream transportation per car. (The CO2 emissions per unit are sourced from the Life Cycle Assessment Society of Japan (JLCA) and GaBi software.)

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

### **Please explain**

### **Waste generated in operations**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

90000

### **Emissions calculation methodology**

Calculated by multiplying a quantity of waste generated through production by CO2 emissions per unit. The CO2 emissions per unit are sourced from Japanese Ministry of Environment “The Data Base of the Factors for Calculation of Organizations' GHG Emission from Supply Chain Ver.3.0”

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

### **Please explain**

### **Business travel**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

170000

### **Emissions calculation methodology**

Calculated by multiplying total distance traveled, which is calculated based on the number of business travels and destination, by CO2 emissions per unit. The CO2 emission per unit are sourced from Japanese Ministry of Environment “The Data Base of the Factors for Calculation of Organizations' GHG Emission from Supply Chain Ver.3.0”

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

### **Please explain**

### **Employee commuting**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

680000

### **Emissions calculation methodology**

Calculated based on commute data (transit subsidy, etc.) and CO2 emissions per unit. The CO2 emissions per unit are sourced from Japan Environmental Management Association for Industry ”Carbon-footprint Communication Program Basic Data Base Ver.1.01” and Japanese Ministry of Environment “The Data Base of the Factors for Calculation of Organizations' GHG Emission from Supply Chain Ver.2.4”.

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

### **Please explain**

### **Upstream leased assets**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

### **Please explain**

Copier machines and PCs are included in upstream leased assets. They are used in Toyota’s offices, so CO2 emissions by using them are calculated as Scope 2.

### **Downstream transportation and distribution**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

10000

### **Emissions calculation methodology**

Calculated based on the typical distance transported per completely built up car (CBU), the total amount of CBUs transported which is calculated by multiplying sales volume by vehicles, and CO2 emissions per unit. The emissions per unit are sourced from the Law on Promotion of Global Warming Countermeasures Japanese Ministry of Environment “GHG Emissions Accounting and Reporting Manual Ver.4.4”.

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

### **Please explain**

### **Processing of sold products**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

1240000

### **Emissions calculation methodology**

Covers part of production of buses and trucks that travel to companies other than Toyota’s consolidated companies. Calculated by multiplying CO2 emissions per truck/bus, which is calculated through a LCA for each representative model, by the number of truck/bus produced. (The CO2 emissions per unit are sourced from the Life Cycle Assessment Society of Japan (JLCA) and GaBi software.)

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

### **Please explain**

### **Use of sold products**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

320500000

### **Emissions calculation methodology**

(1) CO2 emissions from use of products is calculated by 1) averaging CO2 emissions per car sold in Japan, US, EU, China, Canada, Australia, Republic of china, Brazil, India, Saudi Arabia, Thailand and Indonesia. 2) defining it as globally averaged CO2 emissions per car, and 3) multiply it by a global sales volume. The CO2 emissions per unit are sourced from Japan Environmental Management Association for Industry ”Carbon-footprint Communication Program Basic Data Base Ver.1.001” and Japan Environmental Management Association for Industry and the Law on Promotion of Global Warming Countermeasures Japanese Ministry of Environment “GHG Emissions Accounting and Reporting Manual Ver.4.4”. (2) CO2 emissions from maintenance service is calculated by multiplying CO2 emissions from maintenance service per car, which is calculated through a LCA, by the number of cars sold. (The CO2 emissions per unit are sourced from the Life Cycle Assessment Society of Japan (JLCA) and GaBi software.)

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

### **Please explain**

### **End of life treatment of sold products**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

3960000

### **Emissions calculation methodology**

Calculated by multiplying CO2 emissions per unit from disposing used car, by the number of cars sold. (The CO2 emissions per unit are sourced from the Life Cycle Assessment Society of Japan (JLCA) and GaBi software.)

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

### **Please explain**

### **Downstream leased assets**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

### **Please explain**

Toyota has downstream leased assets, mainly car rental services. The number of units used to calculate emissions in “use of sold products” includes rent units, so emissions from “downstream leased assets” is also included in the emissions in use of sold products.

### **Franchises**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

### **Please explain**

Toyota has no franchises.

### **Investments**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

90000

### **Emissions calculation methodology**

Calculated by multiplying the scope 1 and 2 emissions of investee companies in which Toyota Motor Corporation hold stocks, by Toyota’s shareholding ratio. The scope1 and 2 emissions of investee are sourced from specified equity securities and deemed holdings of equity securities.

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

### **Please explain**

### **Other (upstream)**

### **Evaluation status**

Not evaluated

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

### **Please explain**

### **Other (downstream)**

### **Evaluation status**

Not evaluated

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

### **Please explain**

## **C6.7**

### **(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?**

No

## **C6.10**

### **(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

### **Intensity figure**

0.53

### **Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)**

5683661

### **Metric denominator**

vehicle produced

### **Metric denominator: Unit total**

10725214

### **Scope 2 figure used**

Market-based

### **% change from previous year**

0.07

### **Direction of change**

Decreased

### **Reason for change**

In order to reduce CO2 emissions in production activities, Toyota is working to make daily improvements and develop and introduce innovative technology. In 2019, at Toyota plants, the manufacturing unit worked closely with units responsible for production technology and motive power to conduct energy diagnosis, offer suggestions for improvement, and implement necessary measures at production sites, and by doing so, we pushed energy conservation efforts (internal ESCO activities) and applied good examples to other units on a continuous basis. In addition, energy conservation effects were obtained by introducing a wider range of innovative technology mainly in the painting process and using less steam and air and more LED lighting. Meanwhile, Toyota worked with group companies and suppliers to share know-how in energy conservation so that they could reflect it in their operations for improvement. Furthermore, it strove to introduce renewable energy while taking into account the characteristics of the countries and regions in which it operated. Currently, as typified by the ongoing construction of a 21.5MW wind power plant at the Tahara Plant in Japan, the company is promoting the introduction of power generation equipment using renewable energy at the site of its plants.

## **C7. Emissions breakdowns**

## **C7.1**

### **(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**

No

## **C7.2**

### **(C7.2) Break down your total gross global Scope 1 emissions by country/region.**

|  |  |
| --- | --- |
| **Country/Region** | **Scope 1 emissions (metric tons CO2e)** |
| Japan | 1124065 |
| North America | 351803 |
| Europe | 89848 |
| China | 81979 |
| Other, please specify (Rest of the World) | 256424 |

## **C7.3**

### **(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.**

By business division

## **C7.3a**

### **(C7.3a) Break down your total gross global Scope 1 emissions by business division.**

|  |  |
| --- | --- |
| **Business division** | **Scope 1 emissions (metric ton CO2e)** |
| Vehicle plant | 1289616 |
| Parts plant | 614503 |

## **C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4**

### **(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization’s total gross global Scope 1 emissions by sector production activity in metric tons CO2e.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Gross Scope 1 emissions, metric tons CO2e** | **Net Scope 1 emissions , metric tons CO2e** | **Comment** |
| Cement production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Chemicals production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Coal production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Electric utility activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Metals and mining production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (upstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (midstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (downstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Steel production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Transport OEM activities | 1900241 | <Not Applicable> | CO2 emissions (3,878 t-CO2) from Toyota Housing Corp., a housing development company, are excluded. |
| Transport services activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |

## **C7.5**

### **(C7.5) Break down your total gross global Scope 2 emissions by country/region.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Country/Region** | **Scope 2, location-based (metric tons CO2e)** | **Scope 2, market-based (metric tons CO2e)** | **Purchased and consumed electricity, heat, steam or cooling (MWh)** | **Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)** |
| Japan | 1986616 | 1736035 | 3805778 | 292280 |
| North America | 620913 | 620913 | 1633417 | 0 |
| Europe | 173776 | 622 | 473221 | 467294 |
| China | 624344 | 624344 | 1332085 | 0 |
| Other, please specify (Rest of the world) | 839094 | 797627 | 1320468 | 67947 |

## **C7.6**

### **(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.**

By business division

## **C7.6a**

### **(C7.6a) Break down your total gross global Scope 2 emissions by business division.**

|  |  |  |
| --- | --- | --- |
| **Business division** | **Scope 2, location-based (metric tons CO2e)** | **Scope 2, market-based (metric tons CO2e)** |
| Vehicle plant | 2342539 | 2096172 |
| Parts plant | 1902204 | 1683370 |

## **C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7**

### **(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization’s total gross global Scope 2 emissions by sector production activity in metric tons CO2e.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Scope 2, location-based, metric tons CO2e** | **Scope 2, market-based (if applicable), metric tons CO2e** | **Comment** |
| Cement production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Chemicals production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Coal production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Metals and mining production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (upstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (midstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (downstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Steel production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Transport OEM activities | 4230251 | 3765049 | CO2 emissions (14,492 t-CO2) from Toyota Housing Corp., a housing development company, are excluded |
| Transport services activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |

## **C-TO7.8**

### **(C-TO7.8) Provide primary intensity metrics that are appropriate to your indirect emissions in Scope 3 Category 11: Use of sold products from transport.**

### **Activity**

Light Duty Vehicles (LDV)

### **Emissions intensity figure**

0.000097

### **Metric numerator (Scope 3 emissions: use of sold products) in Metric tons CO2e**

248450806

### **Metric denominator**

p.km

### **Metric denominator: Unit total**

2688204288000

### **% change from previous year**

90.6

### **Vehicle unit sales in reporting year**

10500798

### **Vehicle lifetime in years**

10

### **Annual distance in km or miles (unit specified by column 4)**

16000

### **Load factor**

1.6

### **Please explain the changes, and relevant standards/methodologies used**

Toyota stays unchanged from previous year. --Calculation: Denominator is (number of sold units)×(vehicle lifetime)×(annual mileage)×(load factor). Number of sold units: it’s from in-house data Vehicle lifetime and lifetime mileage: commonly used number Annual mileage and load factor: calculated form IEA data

### **Activity**

Heavy Duty Vehicles (HDV)

### **Emissions intensity figure**

0.000066

### **Metric numerator (Scope 3 emissions: use of sold products) in Metric tons CO2e**

57371134

### **Metric denominator**

t.km

### **Metric denominator: Unit total**

867355632000

### **% change from previous year**

93

### **Vehicle unit sales in reporting year**

180024

### **Vehicle lifetime in years**

10

### **Annual distance in km or miles (unit specified by column 4)**

66000

### **Load factor**

7.3

### **Please explain the changes, and relevant standards/methodologies used**

Toyota stays unchanged from previous year. -Calculation: Denominator is (number of sold units)×(vehicle lifetime)×(annual mileage)×(load factor). Number of sold units: it’s from in-house data Vehicle lifetime and lifetime mileage: commonly used number Annual mileage and load factor: calculated form IEA data

## **C7.9**

### **(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Decreased

## **C7.9a**

### **(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Change in emissions (metric tons CO2e)** | **Direction of change** | **Emissions value (percentage)** | **Please explain calculation** |
| Change in renewable energy consumption | 305852 | Decreased | 5.1 | Change in renewable energy consumption attributed to the reason described in column 1: 305,852 t-CO2 Previous year Scope 1+2 emissions: 6,002,279 t-CO2 Emissions value (percentage)=( Change in renewable energy consumption attributed to the reason described in column 1 ÷ Previous year Scope 1+2 emissions) × 100 = (305,852/6,002,279) x 100 = 5.10% Toyota increased self-generation and purchase of renewable power. |
| Other emissions reduction activities | 65446 | Decreased | 1.09 | Change in Scope 1+2 emissions attributed to the reason described in column 1: 65,446 t-CO2 Previous year Scope 1+2 emissions: 6,002,279 t-CO2 Emissions value (percentage)=(Change in Scope 1+2 emissions attributed to the reason described in column 1 ÷ Previous year Scope 1+2 emissions) × 100 =(65,446/6,002,279) x 100=1.09% Toyota upgraded facilities and improved efficiency of production lines. |
| Divestment |  | <Not Applicable> |  |  |
| Acquisitions |  | <Not Applicable> |  |  |
| Mergers |  | <Not Applicable> |  |  |
| Change in output | 85582 | Increased | 1.43 | Change in Scope 1+2 emissions attributed to the reason described in column 1: 85,582 t-CO2 Previous year Scope 1+2 emissions: 6,002,279t-CO2 Emissions value (percentage)=(Change in Scope 1+2 emissions attributed to the reason described in column 1 ÷ Previous year Scope 1+2 emissions) × 100 =(85,582/6,002,279) x100=1.43% |
| Change in methodology |  | <Not Applicable> |  |  |
| Change in boundary |  | <Not Applicable> |  |  |
| Change in physical operating conditions |  | <Not Applicable> |  |  |
| Unidentified |  | <Not Applicable> |  |  |
| Other |  | <Not Applicable> |  |  |

## **C7.9b**

### **(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Market-based

## **C8. Energy**

## **C8.1**

### **(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

More than 0% but less than or equal to 5%

## **C8.2**

### **(C8.2) Select which energy-related activities your organization has undertaken.**

|  |  |
| --- | --- |
|  | **Indicate whether your organization undertook this energy-related activity in the reporting year** |
| Consumption of fuel (excluding feedstocks) | Yes |
| Consumption of purchased or acquired electricity | Yes |
| Consumption of purchased or acquired heat | Yes |
| Consumption of purchased or acquired steam | Yes |
| Consumption of purchased or acquired cooling | Yes |
| Generation of electricity, heat, steam, or cooling | Yes |

## **C8.2a**

### **(C8.2a) Report your organization’s energy consumption totals (excluding feedstocks) in MWh.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Heating value** | **MWh from renewable sources** | **MWh from non-renewable sources** | **Total (renewable and non-renewable) MWh** |
| Consumption of fuel (excluding feedstock) | Unable to confirm heating value | 0 | 10733551 | 10733551 |
| Consumption of purchased or acquired electricity | <Not Applicable> | 827520 | 7264475 | 8091996 |
| Consumption of purchased or acquired heat | <Not Applicable> | 0 | 181354 | 181354 |
| Consumption of purchased or acquired steam | <Not Applicable> | 0 | 292743 | 292743 |
| Consumption of purchased or acquired cooling | <Not Applicable> | 0 | 0 | 0 |
| Consumption of self-generated non-fuel renewable energy | <Not Applicable> | 156325 | <Not Applicable> | 156325 |
| Total energy consumption | <Not Applicable> | 983845 | 18472123 | 19455968 |

## **C8.2b**

### **(C8.2b) Select the applications of your organization’s consumption of fuel.**

|  |  |
| --- | --- |
|  | **Indicate whether your organization undertakes this fuel application** |
| Consumption of fuel for the generation of electricity | Yes |
| Consumption of fuel for the generation of heat | Yes |
| Consumption of fuel for the generation of steam | Yes |
| Consumption of fuel for the generation of cooling | Yes |
| Consumption of fuel for co-generation or tri-generation | Yes |

## **C8.2c**

### **(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

### **Fuels (excluding feedstocks)**

Liquefied Petroleum Gas (LPG)

### **Heating value**

HHV (higher heating value)

### **Total fuel MWh consumed by the organization**

5140

### **MWh fuel consumed for self-generation of electricity**

0

### **MWh fuel consumed for self-generation of heat**

5140

### **MWh fuel consumed for self-generation of steam**

0

### **MWh fuel consumed for self-generation of cooling**

0

### **MWh fuel consumed for self-cogeneration or self-trigeneration**

0

### **Emission factor**

2.8261

### **Unit**

metric tons CO2e per metric ton

### **Emissions factor source**

IPCC2006

### **Comment**

### **Fuels (excluding feedstocks)**

Town Gas

### **Heating value**

HHV (higher heating value)

### **Total fuel MWh consumed by the organization**

10060519

### **MWh fuel consumed for self-generation of electricity**

0

### **MWh fuel consumed for self-generation of heat**

3906803

### **MWh fuel consumed for self-generation of steam**

1612113

### **MWh fuel consumed for self-generation of cooling**

950052

### **MWh fuel consumed for self-cogeneration or self-trigeneration**

3591551

### **Emission factor**

1.858

### **Unit**

kg CO2e per m3

### **Emissions factor source**

IPCC2006

### **Comment**

### **Fuels (excluding feedstocks)**

Other, please specify (kerosene)

### **Heating value**

HHV (higher heating value)

### **Total fuel MWh consumed by the organization**

31472

### **MWh fuel consumed for self-generation of electricity**

0

### **MWh fuel consumed for self-generation of heat**

0

### **MWh fuel consumed for self-generation of steam**

0

### **MWh fuel consumed for self-generation of cooling**

31472

### **MWh fuel consumed for self-cogeneration or self-trigeneration**

0

### **Emission factor**

2.5182

### **Unit**

kg CO2 per liter

### **Emissions factor source**

IPCC2006

### **Comment**

### **Fuels (excluding feedstocks)**

Diesel

### **Heating value**

HHV (higher heating value)

### **Total fuel MWh consumed by the organization**

7430

### **MWh fuel consumed for self-generation of electricity**

0

### **MWh fuel consumed for self-generation of heat**

0

### **MWh fuel consumed for self-generation of steam**

0

### **MWh fuel consumed for self-generation of cooling**

0

### **MWh fuel consumed for self-cogeneration or self-trigeneration**

7430

### **Emission factor**

2.6753

### **Unit**

kg CO2 per liter

### **Emissions factor source**

IPCC2006

### **Comment**

### **Fuels (excluding feedstocks)**

Other, please specify (Heavy Oil A)

### **Heating value**

HHV (higher heating value)

### **Total fuel MWh consumed by the organization**

628989

### **MWh fuel consumed for self-generation of electricity**

25592

### **MWh fuel consumed for self-generation of heat**

0

### **MWh fuel consumed for self-generation of steam**

380472

### **MWh fuel consumed for self-generation of cooling**

147327

### **MWh fuel consumed for self-cogeneration or self-trigeneration**

75599

### **Emission factor**

2.9381

### **Unit**

kg CO2 per liter

### **Emissions factor source**

IPCC2006

### **Comment**

## **C8.2d**

### **(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Total Gross generation (MWh)** | **Generation that is consumed by the organization (MWh)** | **Gross generation from renewable sources (MWh)** | **Generation from renewable sources that is consumed by the organization (MWh)** |
| Electricity | 181917 | 181917 | 156325 | 156325 |
| Heat | 3911943 | 3911943 | 0 | 0 |
| Steam | 1992585 | 1992585 | 0 | 0 |
| Cooling | 1128851 | 1128851 | 0 | 0 |

## **C8.2e**

### **(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero emission factor in the market-based Scope 2 figure reported in C6.3.**

### **Sourcing method**

Unbundled energy attribute certificates, other - please specify (J credit)

### **Low-carbon technology type**

Other, please specify (Unknown)

### **Country/region of consumption of low-carbon electricity, heat, steam or cooling**

Japan

### **MWh consumed accounted for at a zero emission factor**

292280

### **Comment**

### **Sourcing method**

Unbundled energy attribute certificates, Guarantees of Origin

### **Low-carbon technology type**

Other, please specify (Unknown)

### **Country/region of consumption of low-carbon electricity, heat, steam or cooling**

Europe

### **MWh consumed accounted for at a zero emission factor**

467294

### **Comment**

### **Sourcing method**

Unbundled energy attribute certificates, International REC Standard (I-RECs)

### **Low-carbon technology type**

Wind

### **Country/region of consumption of low-carbon electricity, heat, steam or cooling**

Latin America (LATAM)

### **MWh consumed accounted for at a zero emission factor**

19944

### **Comment**

### **Sourcing method**

Unbundled energy attribute certificates, Guarantees of Origin

### **Low-carbon technology type**

Solar

### **Country/region of consumption of low-carbon electricity, heat, steam or cooling**

Asia Pacific (or JAPA)

### **MWh consumed accounted for at a zero emission factor**

48003

### **Comment**

## **C-TO8.5**

### **(C-TO8.5) Provide any efficiency metrics that are appropriate for your organization’s transport products and/or services.**

### **Activity**

Light Duty Vehicles (LDV)

### **Metric figure**

23.66

### **Metric numerator**

tCO2e

### **Metric denominator**

Production: Vehicle

### **Metric numerator: Unit total**

248450806

### **Metric denominator: Unit total**

10500798

### **% change from previous year**

91

### **Please explain**

No significant change was seen compared to the previous year, remained roughly flat.

### **Activity**

Heavy Duty Vehicles (HDV)

### **Metric figure**

318.7

### **Metric numerator**

tCO2e

### **Metric denominator**

Production: Vehicle

### **Metric numerator: Unit total**

57371134

### **Metric denominator: Unit total**

180024

### **% change from previous year**

93.4

### **Please explain**

No significant change was seen compared to the previous year, remained roughly flat.

## **C9. Additional metrics**

## **C9.1**

### **(C9.1) Provide any additional climate-related metrics relevant to your business.**

## **C-TO9.3/C-TS9.3**

### **(C-TO9.3/C-TS9.3) Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.**

### **Activity**

Light Duty Vehicles (LDV)

### **Metric**

Sales

### **Technology**

Conventional hybrid

### **Metric figure**

1920000

### **Metric unit**

Other, please specify (Total sales volume)

### **Explanation**

Global sales volume(including PHVs)

### **Activity**

Light Duty Vehicles (LDV)

### **Metric**

Sales

### **Technology**

Plug-in hybrid vehicle (PHEV)

### **Metric figure**

56524

### **Metric unit**

Other, please specify (Total sales volume)

### **Explanation**

Global sales volume

### **Activity**

Light Duty Vehicles (LDV)

### **Metric**

Sales

### **Technology**

Other, please specify (Vehicle using LPG/CNG)

### **Metric figure**

9598

### **Metric unit**

Other, please specify (Total sales volume)

### **Explanation**

Domestic sales volume (JPN taxis)

### **Activity**

Light Duty Vehicles (LDV)

### **Metric**

Sales

### **Technology**

Vehicle using bio-fuel

### **Metric figure**

28650

### **Metric unit**

Other, please specify (Total sales volume)

### **Explanation**

US sales volume (FFV)

## **C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6**

### **(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?**

|  |  |  |
| --- | --- | --- |
|  | **Investment in low-carbon R&D** | **Comment** |
| Row 1 | Yes |  |

## **C-TO9.6a/C-TS9.6a**

### **(C-TO9.6a/C-TS9.6a) Provide details of your organization’s investments in low-carbon R&D for transport-related activities over the last three years.**

### **Activity**

Light Duty Vehicles (LDV)

### **Technology area**

Unable to disaggregate by technology area

### **Stage of development in the reporting year**

<Not Applicable>

### **Average % of total R&D investment over the last 3 years**

81-100%

### **R&D investment figure in the reporting year (optional)**

### **Comment**

This indicates that the percentage of the combined amount of each area's R&D investments which correspond with what we define as "low-carbon" investments to total R&D investments. (The "low-carbon" investments figure, which is 1,046,600 million yen, cannot be entered in the field of "R&D investment figure in the reporting year" above because its number of digits exceeds the upper limit) This combined amount includes investments made for technology development to improve fuel efficiency to more than the current level, new vehicles that reflect such a higher level of fuel efficiency on their specifications, mission-critical technology for electrification, and system development to create an efficient mobility society.

## **C10. Verification**

## **C10.1**

### **(C10.1) Indicate the verification/assurance status that applies to your reported emissions.**

|  |  |
| --- | --- |
|  | **Verification/assurance status** |
| Scope 1 | Third-party verification or assurance process in place |
| Scope 2 (location-based or market-based) | Third-party verification or assurance process in place |
| Scope 3 | Third-party verification or assurance process in place |

## **C10.1a**

### **(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.**

### **Verification or assurance cycle in place**

Annual process

### **Status in the current reporting year**

Underway but not complete for reporting year – previous statement of process attached

### **Type of verification or assurance**

Limited assurance

### **Attach the statement**

[10.1a 10.1b.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/NL8PywImkk-yR5keG1lPnQ/10.1a10.1b.pdf)

[Environmental Report2019.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/Dwz11n9Yz0eqMBh9gd1v9w/EnvironmentalReport2019.pdf)

### **Page/ section reference**

Environmental Report 2019 P27: Trends in Global Total CO2 Emissions and CO2 Emissions per Unit Produced p55:Global Energy Consumption P59: Independent Practitioner's Assurance Report

### **Relevant standard**

ISAE 3410

### **Proportion of reported emissions verified (%)**

100

## **C10.1b**

### **(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.**

### **Scope 2 approach**

Scope 2 location-based

### **Verification or assurance cycle in place**

Annual process

### **Status in the current reporting year**

Underway but not complete for reporting year – previous statement of process attached

### **Type of verification or assurance**

Limited assurance

### **Attach the statement**

[10.1a 10.1b.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/NL8PywImkk-yR5keG1lPnQ/10.1a10.1b.pdf)

[Environmental Report2019.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/Dwz11n9Yz0eqMBh9gd1v9w/EnvironmentalReport2019.pdf)

### **Page/ section reference**

Environmental Report 2019 P27: Trends in Global Total CO2 Emissions and CO2 Emissions per Unit Produced p55:Global Energy Consumption P59: Independent Practitioner's Assurance Report

### **Relevant standard**

ISAE 3410

### **Proportion of reported emissions verified (%)**

100

## **C10.1c**

### **(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.**

### **Scope 3 category**

Scope 3 (upstream & downstream)

### **Verification or assurance cycle in place**

Annual process

### **Status in the current reporting year**

Underway but not complete for reporting year – previous statement of process attached

### **Type of verification or assurance**

Third party verification/ assurance underway

### **Attach the statement**

[Environmental Report2019.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/Dwz11n9Yz0eqMBh9gd1v9w/EnvironmentalReport2019.pdf)

### **Page/section reference**

Environmental Report 2019 P23: Response to Scope3 P59: Independent Practitioner's Assurance Report

### **Relevant standard**

ISAE 3410

### **Proportion of reported emissions verified (%)**

100

## **C10.2**

### **(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**

Yes

## **C10.2a**

### **(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?**

|  |  |  |  |
| --- | --- | --- | --- |
| **Disclosure module verification relates to** | **Data verified** | **Verification standard** | **Please explain** |
| C6. Emissions data | Year on year emissions intensity figure | ISO14064-3 | C6.10 |
| C7. Emissions breakdown | Other, please specify (CO2 emissions by region) | ISO14064-3 | C7.2, C7.5 |
| C7. Emissions breakdown | Energy consumption | ISO14064-3 | C8.2a |

## **C11. Carbon pricing**

## **C11.1**

### **(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

Yes

## **C11.1a**

### **(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**

EU ETS

## **C11.1b**

### **(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.**

### **EU ETS**

### **% of Scope 1 emissions covered by the ETS**

1.9

### **% of Scope 2 emissions covered by the ETS**

0

### **Period start date**

January 1 2019

### **Period end date**

December 31 2019

### **Allowances allocated**

36967

### **Allowances purchased**

0

### **Verified Scope 1 emissions in metric tons CO2e**

19635

### **Verified Scope 2 emissions in metric tons CO2e**

0

### **Details of ownership**

Facilities we own and operate

### **Comment**

## **C11.1d**

### **(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?**

Toyota participates in EU-ETS. Below is how Toyota complies with this system. Energy saving is the first measure Toyota uses to achieve the EU-ETS cap. Additionally, Toyota considers the use of renewables and low-carbon hydrogen as the second measure to fulfill any shortfall. To promote energy-saving activities, Toyota takes a two-pronged approach: introduction of innovative technology, and cutting greenhouse gas emissions by reviewing/improving routine work. Under “Toyota Regional No.1 Leadership,” a concept which aims to become “the best-in-town” plant, Toyota collaborates with plants in Europe to share their experience and to implement joint programs to build better capacity among employees. Toyota is determined not to sell the credits earned through energy saving activities for the purpose of profit. This is because Toyota is concerned that such selling makes the cap-and-trade system prone to speculation.

<Example of how you have applied your strategy>

For example, Toyota Motor Manufacturing (UK) Ltd. (TMM-UK) is a participant in EU-ETS. TMM-UK carries out thorough energy saving activities to stay within the cap. TMM-UK has introduced simple and slimline facilities at the time of upgrading their production lines and processes, and has conducted “Internal ESCO Activities,” in which employees make energy diagnoses and improvement proposals, specifically, replacements with LED lighting, discontinued use of inefficient vapor/compressed air systems (improved compressor efficiency), and constant air-conditioning control. As a result, Toyota stays within the cap every year up until now and earns credits.

## **C11.2**

### **(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**

No

## **C11.3**

### **(C11.3) Does your organization use an internal price on carbon?**

No, but we anticipate doing so in the next two years

## **C12. Engagement**

## **C12.1**

### **(C12.1) Do you engage with your value chain on climate-related issues?**

Yes, our suppliers

Yes, our customers

Yes, other partners in the value chain

## **C12.1a**

### **(C12.1a) Provide details of your climate-related supplier engagement strategy.**

### **Type of engagement**

Information collection (understanding supplier behavior)

### **Details of engagement**

Collect climate change and carbon information at least annually from suppliers

### **% of suppliers by number**

100

### **% total procurement spend (direct and indirect)**

100

### **% of supplier-related Scope 3 emissions as reported in C6.5**

100

### **Rationale for the coverage of your engagement**

Toyota continues to manufacture better products with higher quality by communicating often with suppliers and building good relationships. It is very important that all suppliers maintain and improve their quality, whether they are domestic, overseas, or regional. Also, the suppliers are located all over the world. The rationale for our engagement coverage is that working on climate change measures with suppliers will enable solution of global issues related to climate change. These are the reasons behind distributing “Green Procurement Guidelines” to all domestic and overseas suppliers. Also, Toyota promotes reducing their GHG emissions and decreasing CO2 emissions from logistics. In addition, Toyota asks suppliers with higher procurement amount to participate in the CDP Supply Chain Program to collect information about their climate change strategies, governance, and CO2 emissions status.

### **Impact of engagement, including measures of success**

[Description of measures of success] The automotive sector is an industry with a wide support base. Taking action to reduce CO2 emissions from the entire vehicle life cycle will contribute to the advancement of global climate action. For this reason, Toyota identifies the target to achieve zero CO2 emission from the entire product life cycle as Challenge 2 under the Toyota Environmental Challenge 2050. Throughout the vehicle life cycle, the procurement stage emits the highest volume of CO2 after the product use stage. Therefore, in terms of CO2 reduction, this is a key stage. For the reduction of CO2 emissions from its products or the company, Toyota is able to independently engage in activities such as R&D, and make its own efforts towards this end. On the other hand, the reduction of CO2 emissions at the procurement stage requires Toyota to work with its suppliers. For this reason, Toyota encourages many supplier to participate in the CDP Supply Chain Program to raise their awareness on CO2 reductions, thereby achieving the reduction of CO2 emissions from the product life cycle. Thus, the total procurement amount coverage (number of participatory companies /procurement amount) of suppliers participating in the CDP Supply Chain Program is one of the measures of success. Toyota determines success if suppliers participating in the program exceed 80% of coverage. [Impact of engagement according to the measures of success] Suppliers participating in the reporting year covered 84% of Toyota’s procurement amount. For three consecutive years, starting from 2017, more than 80% coverage was recorded. Because of continuous high coverage, this is evaluated as a success. In addition, concerning the CO2 emissions reductions achieved by suppliers, their responses to the CDP Supply Chain Program confirmed that about 2/3 of suppliers successfully reduced CO2 emissions by intensity (CO2 emissions/sales amount) from the previous year. As discussed above, Toyota has been steadily promoting activities for the reduction of CO2 emissions from the product life cycle.

### **Comment**

## **C12.1b**

### **(C12.1b) Give details of your climate-related engagement strategy with your customers.**

### **Type of engagement**

Education/information sharing

### **Details of engagement**

Share information about your products and relevant certification schemes (i.e. Energy STAR)

### **% of customers by number**

70

### **% of customer - related Scope 3 emissions as reported in C6.5**

70

### **Portfolio coverage (total or outstanding)**

<Not Applicable>

### **Please explain the rationale for selecting this group of customers and scope of engagement**

Toyota implements educational programs for customers in Japan, North America, Europe and some other regions to reduce greenhouse gas (GHG) emissions from driving. These markets represent 70% of all Toyota sales around the world, so it is important for Toyota to start cooperating with customers in these regions in order to contribute to reducing global greenhouse gas emissions. This is the rationale for selecting this group. Also, Toyota thinks it is effective to reduce GHG emissions in category 11 of its Scope 3.

### **Impact of engagement, including measures of success**

[Description of measures of success] Toyota sees that activities to raise the public awareness on GHG emission reduction from driving encourage customers to engage in eco-driving or to purchase low-emission vehicles, which will lead to GHG reductions. Therefore, a year-on-year increase in the sales of electrified vehicles is the measure of success. To raise the public’s awareness, Toyota’s fuel economy (km/l or gCO2/km) is available in product catalogs or on product websites. The fuel economy figures are calculated and certified by official rules in the markets where Toyota sells vehicles. Toyota’s vehicles are equipped with an Eco Drive Indicator, with which drivers can check their average fuel mileage to make their driving more fuel efficient. [Impact of engagement according to the measures of success] The measure indicates a success; in the reporting year, the sales of electrified vehicles (HVs, PHVs, EVs and FCVs) including Prius and MIRAI saw a year-on-year increase of 17%, contributing to GHG reductions. The strong sales of HVs increased the sales volume in North America and Europe, bringing a positive financial impact.

## **C12.1d**

### **(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.**

[Details about other partners in the value chain]

Toyota is carrying out various climate activities, such as the development of low-emission/electrified vehicles and CO2 reductions at plants. However, what Toyota can do is limited. Therefore, Toyota has a strategy to build partnerships with various stakeholders, including suppliers, customers, dealers, policymakers, and other companies, recognizing the importance of collaborative action which mobilizes the entire society. Toyota attaches particular weight to joint action through its value chain other than suppliers and customers, with a focus on educational programs. In particular, Toyota places importance on dealers: the first window for customers. Below is an example. Toyota sells the vehicles it produces at its plants to customers via dealers. Toyota has 339 dealers throughout Japan, including 42 dealers which it owns.

[Case study of engagement strategy]

As the first window for customers, dealers play an important role in raising customers’ awareness of eco-driving and other eco-friendly behavior. The tasks are to raise the level of climate awareness among dealers, encouraging them to pursue a certain level of action and through it, to enhance the credibility of Toyota among customers. Toyota has dealers all over Japan. Using its widespread network contributes to helping solve climate challenges that Toyota cannot deal with alone. This is why Toyota rolls out joint efforts with all of its dealers. As specific action, Toyota undertakes distribution of Toyota Dealer CSR Guidelines, support for dealer activity based on these Guidelines, collection of CO2 emission data, and support for the introduction of the environmental management system. These actions will result in reduction of CO2 emissions across Toyota’s value chain and enhancement of Toyota’s reputation on environmental issues.

## **C12.3**

### **(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?**

Trade associations

## **C12.3b**

### **(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?**

Yes

## **C12.3c**

### **(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.**

### **Trade association**

JAMA (Japan Automobile Manufacturers Association, Inc.)

### **Is your position on climate change consistent with theirs?**

Consistent

### **Please explain the trade association’s position**

The Japanese automobile industry scientifically discusses climate change mitigation measures with the Japanese government, and tries to make them feasible in real terms. Japan Automobile Manufacturers Association, Inc. (JAMA) has proactively committed to climate change mitigation in cooperation with not only the Japanese government but also other national governments. JAMA shared Japanese industry's comprehensive climate measures and experiences with the Philippine and Indonesian governments in the reporting year.

### **How have you influenced, or are you attempting to influence their position?**

Toyota assumes the JAMA Chairman, the Chairman of its Environmental Committee, and other key positions and proactively commit to climate change mitigation discussion and implementation. Toyota Environmental Challenge 2050 is consistent with JAMA's proactive policy which aims to improve fuel economy, and develop next generation vehicles, making them more widely available in the market.

### **Trade association**

Keidanren (Japan Business Federation)

### **Is your position on climate change consistent with theirs?**

Consistent

### **Please explain the trade association’s position**

Keidanren tries to make climate mitigation measures feasible in real terms through scientific discussions with the Japanese government. Keidanren developed the "Commitment to a Low Carbon Society” which indicates companies’ 2030 targets to reduce CO2 emissions, and follows up on these companies’ progress every year. Also, “Society 5.0”, which Keidanren works on proactively, is for maximizing energy efficiency and expanding the use of renewable energy through ICT, recommending inclusive social reforms through the 4th industrial revolution toward a decarbonized society.

### **How have you influenced, or are you attempting to influence their position?**

Toyota participates in the "Commitment to a Low Carbon Society”. Toyota Environmental Challenge 2050 is consistent with this initiative. Toyota assumes the Vice Chair of Keidanren, the Commissioner of the Environment Safety Committee, and other various positions, and participates in active discussions/implementations on climate change mitigation. As the Vice President of Keidanren, Toyota Vice Chairman of the Board of Directors (Representative Director) actively participated in discussions with Chairman and Vice Chairs for the development and promotion of Keidanren policy proposals. As a result, Keidanren proposed "Challenge Zero - Innovation Challenges Towards a Net Zero Carbon Society" in December 2019.

## **C12.3f**

### **(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?**

Toyota makes policy recommendations via business associations (JAMA and Keidanren in Japan) in respective countries.

Recommendation drafts are distributed to member companies prior to the meetings, which discuss the draft at the business associations. Prior to these meetings, Toyota internally looks into whether or not there is any inconsistency between the draft and the Toyota Environmental Challenge 2050, Toyota’s global climate policy, the “2030 Milestone”, which presents an interim milestone of the Challenge, the 7th Environmental Action Plan, which outlines the targets by 2025, and environmental goals of respective regions. If there is a significant inconsistency, Toyota expresses its opinion at the meetings. This is how Toyota ensures consistency.

Toyota’s executives or employees participate in the decision-making bodies or their subordinate meetings at the business associations. They have prior discussions with other relevant divisions internally to ensure consistency with Toyota's corporate strategy. Toyota’s opinions expressed at these external meetings are based on the internal discussions.

At Toyota, executive level persons assume the positions of Commissioner of the monthly JAMA’s Environment Committee and Commissioner of the biannual Keidanren’s Environment Safety Committee, recognizing their importance as an opportunity to talk about climate-related issues. Meetings of both committees are held in Japan.

Toyota’s executives or employees express opinions at these meetings to ensure consistency between advocacy of the associations and Toyota’s climate policy.

[Process implemented]

Below is the discussion process at JAMA’s Environment Committee. While Toyota’s Executive Vice President participates in the Committee as the Commissioner, those in charge at the Environmental Affairs Division at Toyota participate in the subordinate meeting body, the Climate Change Subcommittee.

1) Toyota’s persons in charge of the Climate Change Subcommittee discuss the agenda with the internal relevant divisions (Environmental Affairs Division, External Affairs Division, R&D, Engineering Management Division, etc.)

2) The persons in charge speak at the Subcommittee to ensure consistency between JAMA’s recommendations and Toyota’s strategy. If the Subcommittee finds there is further need for discussion, such agenda is reported to the Environment Committee.

3) Toyota’s Executive Vice President (in charge of the Environment Committee) and those in charge discuss the agenda with each other to finalize Toyota’s view.

4) At this point, Toyota’s Executive Vice President ensures consistency with Toyota’s strategy, and speaks at the Environment Committee.

## **C12.4**

### **(C12.4) Have you published information about your organization’s response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

### **Publication**

In mainstream reports

### **Status**

Complete

### **Attach the document**

[Security and Exchange Commission SEC(FORM20-F)2019.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/p3aUvW5hQUi4yqyprFGKuw/SecurityandExchangeCommissionSECFORM20F2019.pdf)

### **Page/Section reference**

Security and Exchange Commission SEC 〔Ｆ Ｏ Ｒ Ｍ ２ ０ － Ｆ 〕2019 -Governance p127 -Strategy(Toyota Environmental Challenge 2050) p12 -Risks & opportunities p4,120

### **Content elements**

Governance

Strategy

Risks & opportunities

### **Comment**

### **Publication**

In voluntary communications

### **Status**

Underway – previous year attached

### **Attach the document**

[Environmental Report2019.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/Dwz11n9Yz0eqMBh9gd1v9w/EnvironmentalReport2019.pdf)

### **Page/Section reference**

Environmental Report2019 -Governance : p47 -Strategy(Toyota Environmental Challenge 2050): p9,10 -Risks & opportunities (Identify Key Challenges (Materiality): p9 ( Materiality Step 3) -Emissions figures : p23( Scope 3) ,27( Scope 1,2) -Emission targets:p10(Medium term),p10(Long term), 14,15 (Short term)

### **Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

### **Comment**

### **Publication**

In voluntary sustainability report

### **Status**

Underway – previous year attached

### **Attach the document**

[Sustainability Data Book2019.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/JCKwkf0AUES_YCjaISsZHg/SustainabilityDataBook2019.pdf)

### **Page/Section reference**

Sustainability Data Book2019 -Governance p90、104-108 -Strategy(Toyota Environmental Challenge 2050) p51-54 -Risks & opportunitiesIdentify Key Challenges (Materiality) p51 ( Materiality Step 3) -Emissions figures p65,69 -Emission targets p52(Mediumu term), 52(Long term),56,57(Short term)

### **Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

### **Comment**

### **Publication**

In mainstream reports

### **Status**

Complete

### **Attach the document**

[Security and Exchange Commission SEC(FORM20-F)2020.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/zO8Wgs0heUOxHx_7DqimdA/SecurityandExchangeCommissionSECFORM20F2020.pdf)

### **Page/Section reference**

Security and Exchange Commission SEC 〔Ｆ Ｏ Ｒ Ｍ ２ ０ － Ｆ 〕2020 -Governance p132 -Strategy(Toyota Environmental Challenge 2050) p13 -Risks & opportunities p4,125

### **Content elements**

Governance

Strategy

Risks & opportunities

### **Comment**

## **C15. Signoff**

## **C-FI**

### **(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.**

## **C15.1**

### **(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

|  |  |  |
| --- | --- | --- |
|  | **Job title** | **Corresponding job category** |
| Row 1 | Vice Chairman of the Board of Directors, (Representative Director), Chief Sustainability Officer(CSO) | Director on board |