# **Mitsubishi Motors Corporation - Climate Change 2019**

## **C0. Introduction**

## **C0.1**

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

Mitsubishi Motors Corporation (MMC) was established as an independent company from Mitsubishi Heavy Industries, Ltd. in 1970. Currently MMC (including its consolidated subsidiaries) manufactures vehicles in four countries. Its total number of employees on a consolidated basis is 31,314 (FY2018). In FY2018 MMC sold a total of 1.244 million vehicles, earning sales revenue of 2.5146 triillion yen.

In 2009, it launched i-MiEV, the world’s first mass produced electric vehicle and in 2013, it launched the Outlander PHEV, a plugin hybrid vehicle. It has been a member of the Renault-Nissan alliance since October 2016.

## **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** |
| Row 1 | April 1 2018 | March 31 2019 | No | <Not Applicable> |

## **C0.3**

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

Australia

China

Germany

Indonesia

Japan

Netherlands

New Zealand

Philippines

Puerto Rico

Thailand

United Arab Emirates

United States of America

## **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 consolidation approach to your Scope 1 and Scope 2 greenhouse gas 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)

## **C1. Governance**

## **C1.1**

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

No

## **C1.1c**

### **(C1.1c) Why is there no board-level oversight of climate-related issues and what are your plans to change this in the future?**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Primary reason** | **Board-level oversight of climate-related issues will be introduced within the next two years** | **Please explain** |
| Row 1 | Mitsubishi Motors’ Board of Directors entrusts the CEO with the authority about climate-related issues. Board-level oversight of climate-related issues is in charge of “CSR Management Committee” which chair is the CEO. | Yes, we plan to do so within the next two years | We’ll build a system that reporting to board about the important climate-related issues in 2 years. |

## **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)** | **Responsibility** | **Frequency of reporting to the board on climate-related issues** |
| Other committee, please specify (CSR Management Committee) | Both assessing and managing climate-related risks and opportunities | As important matters arise |

## **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).**

MMC has set up the Executive Committee, an executive decision-making body directly below the Board of Directors. The CSR Management Committee, chaired by the CEO, was established directly below the Executive Committee. It is aimed at promoting CSR initiatives and information disclosure, and also at improving non-financial value. The CSR Management Committee discusses responses to climate change issues. Any matters deemed to be of particular importance in terms of business strategy are put to the Executive Committee and then the Board of Directors for decision or approval.

## **C1.3**

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

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).**

### **Who is entitled to benefit from these incentives?**

All employees

### **Types of incentives**

Monetary reward

### **Activity incentivized**

Emissions reduction project

### **Comment**

MMC offers a commuting allowance to employees who drive to work in EVs manufactured by MMC, both to help reduce the CO2 emissions of employees and to promote our EVs outside the company.

## **C2. Risks and opportunities**

## **C2.1**

### **(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **From (years)** | **To (years)** | **Comment** |
| Short-term | 1 | 1 |  |
| Medium-term | 1 | 3 | The planning periods are defined in our mid-term initiative plan “Environment Initiative Program 2019”. They are synchronized with our mid-term business plan “Drive for Growth”. |
| Long-term | 3 |  |  |

## **C2.2**

### **(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.**

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

## **C2.2a**

### **(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Frequency of monitoring** | **How far into the future are risks considered?** | **Comment** |
| Row 1 | Annually | >6 years | Information on climate change-related risks and opportunities until the year 2030 that has been gathered and evaluated by the Environmental Management Department. Then, that are shared at the CSR Management Committee held once a year and reflected in the formulation and review of goals and plans for environmental initiatives. MMC’s environmental management units utilize the IPCC’s 2DS (2°C scenario) and IEA forecast data to identify and assess risks and opportunities, looking up to six years into the future. |

## **C2.2b**

### **(C2.2b) Provide further details on your organization’s process(es) for identifying and assessing climate-related risks.**

### **(ⅰ)How climate-related risks are identified and assessed at a company level**

Environmental management units have been set up at all premises and development-related departments of MMC and its affiliated companies, for identifying risks and opportunity factors as far ahead as 2030. The environmental management unit at MMC head office then collects and assesses all the factors. The collected factors especially related to regulation and factors with the potential to affect medium-term action plans are analyzed in light of the IPCC 2C Scenario and IEA trend forecasts, to evaluate the magnitude, scope, and probability of risks in terms of risk location and potential financial impact. As a result of this assessment, we identify factors that could lead to financial penalties for MMC or that could impact significantly on product sales, defining them as “risks and opportunities of substantial impact.” These results are monitored through discussions held each year by the CSR Management Committee, and cases deemed particularly important to business strategy are put to the Executive Committee and then to the Board of Directors for decision or approval.

### **(ⅱ)How climate-related risks are identified and assessed at an asset**

Once a year, the Environmental Management Departments in the offices of the Company and its affiliates gathers the views of stakeholders such as local residents and municipalities as well as information on the regulatory trends of each country or municipality or country where it is located to identify the risk and opportunity factors. The information then goes into reports submitted to the Environmental Management Department (CSR/Environment Division), which incorporates the asset-level risk/opportunity factors into its Company-level risk assessments.

### **(ⅲ)The process in place for assessing the potential size and scope of identified risks**

MMC calculates the financial impact of specified climate-related risks on the company’s financial performance indicators through a scenario analysis implementation process.

### **(ⅳ)The process by which the organization determines the relative significance of climate-related risks in relation to other risks**

For MMC, the physical risks arising from progressive climate change include both climate change risks and water risks (e.g., risks that could force disruption or shutdown of production facilities or supply chains, due to flooding or submersion following heavy rain). Consequently, for its scenario analysis, MMC is using data concerning not only climate change but also water and other kinds of risks.

### **(ⅴ)The definitions of risk terminologies used or references to existing risk classification frameworks used**

To identify climate change risks, MMC refers to the forecast scenarios of the IPCC (Intergovernmental Panel on Climate Change) and the proposals of the TCFD (Task Force on Climate-related Financial Disclosures).

### **(ⅵ)How the company defines substantive financial or strategic impacts on its business**

MMC defines the degree of impact of climate-related risks on the company’s profits as follows. Less than ¥20 million: Low, ¥20 million - less than ¥100 million: Low-medium, ¥100 million - less than ¥1 billion: Medium, ¥1 billion – less than ¥5 billion: Medium-high, ¥5 billion or more: High

## **C2.2c**

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

|  |  |  |
| --- | --- | --- |
|  | **Relevance & inclusion** | **Please explain** |
| Current regulation | Relevant, always included | The CO2 emitted by vehicles is a major cause of climate change. For this reason, Japan, the EU, and other countries and regions have instituted regulations relating to fuel consumption and CO2 emissions, as a way to promote greater adoption of low-emission vehicles. The regulations in these countries in which MMC does business can impact the company’s sales performance. In the scenario analysis it conducted in FY2018, MMC took into account the increasing strictness of ZEV (Zero Emission Vehicle) regulations as a social change. |
| Emerging regulation | Relevant, always included | CO2 emissions from running vehicles are recognized as one of the major causes of climate change. As a climate change countermeasure, each country has established regulations governing the fuel efficiency and CO2 emissions of vehicles. If the ASEAN countries (Thailand, the Philippines, Indonesia) where MMC sells most of its products introduce regulations to limit the fuel consumption and CO2 emissions of vehicles in the coming years, controls on the sale of vehicles may be implemented. The regulations in these countries in which MMC does business impact the company’s sales. In the scenario analysis it conducted in FY2018, MMC took into account the increasing strictness of ZEV (Zero Emission Vehicle) regulations as a change in social circumstances. |
| Technology | Relevant, always included | Due to increasing public concern about the issue of climate change, some countries and regions are actively promoting a shift away from conventional vehicles with engines that emit CO2 towards EVs. Norway, for example, where MMC sells approximately 5,000 vehicles per year, has set itself the goal of 100% ZEVs (Zero Emission Vehicles) that do not emit any exhaust gases by 2025. If we fall behind in the development of EV technology, it will be difficult to sell MMC products in such regions, putting at risk the company’s total sales. In the scenario analysis implemented in FY2018, MMC took into account the spread of EV technology as an anticipated social change. |
| Legal | Relevant, sometimes included | As the environmental awareness of stakeholders increases, consumers will increasingly tend to choose eco-friendly EVs like MMC’s Outlander PHEV when they consider the purchase of a new vehicle. However, some countries and regions are still in the early growth phase as EV markets. For this reason, there is a risk that a major lawsuit relating to EVs (e.g., concerning false claims of battery life or range) in countries or regions where MMC sells its products could cause damage to the trust of MMC products. |
| Market | Relevant, always included | With the adoption of the Paris Agreement, the environmental consciousness of stakeholders grew all over the world. At the same time, there has been a shift in consumer preferences from “owning” to “sharing” a vehicle. We believe that such changes in consumer attitude and behavior will impact on MMC’s product sales. In the scenario analysis that MMC has implemented, this kind of market risk is taken into account as a real possibility in the future, along with climate-related risks such as the intensification of natural disasters. |
| Reputation | Relevant, always included | Due to the progression in climate change, customer needs for environmental considerations to be taken into account by companies and ESG investment opportunities are expanding. If stakeholders were to deem that our climate change countermeasures are inadequate under such a social trend, our reputation will be affected, and a deterioration in sales and a drop in corporate value can be expected. |
| Acute physical | Relevant, sometimes included | Due to the increase in sea surface temperature caused by climate change, at many places around the world in recent years tropical cyclones and tornadoes that pose threats to human life and corporate activities have occurred with increasing frequency. The possible occurrence of any disaster of this level in the countries or regions in which MMC has production facilities is a serious risk to the company’s operations and supply chain. In fact, the severe floods that hit western Japan in July 2018 damaged MMC production plants and the facilities of some of its suppliers, impacting the company’s operations. The scenario analysis that MMC conducted in FY2018 assumed an intensification of natural disasters in the future, taking into account the risks of damage from such disasters, e.g., physical damage to the company’s supply chain and interruption of operations. |
| Chronic physical | Relevant, sometimes included | If there is a change in the average air temperature of the country or region that we operate in due to climate change, the increase in business cost accompanying an increase in the energy cost required for air-conditioning will be a concern. |
| Upstream | Relevant, sometimes included | Upstream of the supply chain, we assumed the risk of a steep rise in the price of energy due to increased demand for fossil fuels, as well as the risk of supply chain disruption. Any change in the energy expenses incurred by our suppliers has the potential to impact the prices we pay for parts and materials. |
| Downstream | Relevant, sometimes included | If MMC is unable to adapt to the vehicle-related regulations of some countries, there is a risk that local dealers (our customers) will be impacted by the regulations to the point of having to suspend sales. In the scenario analysis conducted in FY2018, MMC took into account the increasing strictness of regulations relating to the CO2 emissions of vehicles as a social change. |

## **C2.2d**

### **(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.**

MMC promotes initiatives in all sections of the company, by reporting the climate-related risks identified by the environmental management units set up at all of the offices and development departments of MMC and the affiliated companies to the CSR Management Committee meetings held once a year. Initiatives of particular importance (e.g., reducing CO2 emitted by MMC products) are included in the “Environment Initiative Program 2019,” the company’s medium-term action plan.

### **<Examples of applying management processes>**

MMC considers the potential impacts of natural disasters on the company or its supply chains as a physical risk. In fact, previous disasters in Thailand and Japan resulted in delays to the supply of parts to our production plants. Torrential rains in Japan in 2018 caused a loss of approximately ¥1.4 billion in MMC’s operating profit. To protect itself against the risk of this type of supply chain disruption, MMC has formulated BCPs for all its major parts suppliers.

In terms of transition risk, MMC is analyzing the potential impact of regulations relating to fuel consumption and vehicle CO2 emissions. If MMC’s products cannot meet the fuel consumption standards of the countries where it does business, the company may be subjected to financial penalties. To avoid this kind of regulatory risk, MMC is pursuing technology development aimed at improving the fuel consumption of combustion engine-based cars and improving the power consumption of EVs. Since our Outlander PHEV and other EVs have the environmental performance to meet fuel consumption standards, their technology is effective in countering this regulatory risk. Thus, in FY2018 MMC invested approximately ¥13.2 billion in EV-related R&D.

## **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?**

Direct operations

### **Risk type**

Transition risk

### **Primary climate-related risk driver**

Policy and legal: Mandates on and regulation of existing products and services

### **Type of financial impact**

Increased costs and/or reduced demand for products and services resulting from fines and judgments

### **Company- specific description**

With the progress of climate change, MMC needs to meet regulations relating to fuel consumption and CO2 emissions. For example, EU, where MMC sells products, is expected to introduce stricter regulations that is 15% stronger than current regulations on CO2 emissions in 2025. Furthermore, in 2030, it is expected to introduce stricter regulations that is 22.5% stronger for a segment of passenger vehicle and 16% for a segment of commercial vehicle than 2025 regulations. If MMC cannot meet the fuel consumption standards of EU, it may face financial penalties amounting to approximately 95 € every 1g of CO2 emitted when a vehicle driving 1 km. To adapt to these regulations, we drive to both improve our combustion engine vehicles and spread Outlander PHEV and other EVs widely.

### **Time horizon**

Long-term

### **Likelihood**

Likely

### **Magnitude of impact**

High

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

Yes, a single figure estimate

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

2700000000

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

<Not Applicable>

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

<Not Applicable>

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

In EU, where MMC sells products, it may face financial penalties amounting to approximately 95 € (11,400 yen) every 1g of CO2 emitted when a vehicle driving 1 km if MMC cannot meet the fuel consumption standards. It sells approximately 200 thousand vehicles in EU, so estimated financial penalties amounting is 2.7 billion yen.

### **Management method**

We drive to improve our combustion engine vehicles to adapt to regulations relating to fuel consumption and CO2 emissions. For our EVs, we are working on higher capacity batteries and more highly efficient motors to reduce electricity consumption. In FY2018 MMC invested a total of ¥13.2 billion in R&D for EVs. MMC focuses its EV efforts largely on the Japan and Europe markets. For four consecutive years from 2015 our Outlander PHEV has been the biggest selling product in its category in Europe.

### **Cost of management**

13200000000

### **Comment**

### **Identifier**

Risk 2

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

Customer

### **Risk type**

Transition risk

### **Primary climate-related risk driver**

Reputation: Increased stakeholder concern or negative stakeholder feedback

### **Type of financial impact**

Reduced revenue from decreased demand for goods/services

### **Company- specific description**

After the conclusion of the Paris Agreement, the awareness of stakeholders towards climate change has increased dramatically. Vehicles are known as one of the main emission sources of GHG and thus vehicle manufacturers are facing strong calls from stakeholders for action to combat climate change, e.g., to cut CO2 emissions or to increase the penetration of EVs, which do not emit CO2. As an example, in Norway, where MMC sells around 5,000 vehicles a year, there is a strong nation-wide interest in tackling climate change, e.g., by setting the goal of achieving 100% sales of ZEVs (Zero Emission Vehicles), which do not emit any exhaust gases, by 2025. If the climate change countermeasures in our business activities are inadequate, or if they are not understood sufficiently by our stakeholders, our social trust will be damaged, and this may exert an adverse impact on our sales.

### **Time horizon**

Long-term

### **Likelihood**

Likely

### **Magnitude of impact**

High

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

Yes, a single figure estimate

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

200000000000

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

<Not Applicable>

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

<Not Applicable>

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

Since conventional vehicles emit CO2 when they drive, they affect climate change. In general, the more fuel is consumed to power a vehicle, the more CO2 is emitted. For this reason, vehicles with good fuel economy can be considered effective products for mitigating climate change. MMC’s revenue in FY2016, the year in which the company was caught up in a fuel consumption-related scandal losed approximately ¥200 billion. If another scandal that damaged trust in the company occurred in the years ahead, MMC would likely face a similar financial blow.

### **Management method**

We drive to improve our combustion engine vehicles to adapt to regulations relating to fuel consumption and CO2 emissions. For our EVs, we are working on higher capacity batteries and more highly efficient motors to reduce electricity consumption.In FY2018, MMC invested a total of ¥13.2 billion in EV-related R&D. MMC focuses its EV efforts largely on the Japan and Europe markets. For four consecutive years from 2015 our Outlander PHEV has been the biggest selling product in its category in Europe.

### **Cost of management**

13200000000

### **Comment**

### **Identifier**

Risk 3

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

Supply chain

### **Risk type**

Physical risk

### **Primary climate-related risk driver**

Acute: Increased severity of extreme weather events such as cyclones and floods

### **Type of financial impact**

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

### **Company- specific description**

Due to the increase in sea surface temperature caused by climate change, at many places around the world in recent years tropical cyclones and tornadoes that pose threats to human life and corporate activities have occurred with increasing frequency. The possible occurrence of any disaster of this level in Japan or other parts of Asia, where MMC has production facilities, is a serious risk to the company’s operations and supply chain. In fact, the severe floods that hit western Japan in July 2018 damaged MMC production plants and the facilities of some of its suppliers, causing delays in the supply of parts to MMC plants and impacting the company’s operations.

### **Time horizon**

Long-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)**

1400000000

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

<Not Applicable>

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

<Not Applicable>

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

The severe floods that hit western Japan in July 2018 caused severe damage to MMC’s Mizushima Plant and the facilities of some of its suppliers. Operations were stopped for one week, resulting in a loss in operating profit of ¥1.4 billion.

### **Management method**

To address the risks of supply-chain disruption, the Company is having its major parts suppliers complete their BCPs and establish measures for resuming production as quickly as possible in the event of a disaster. To monitor its suppliers, the Company shares applicable systems and requires suppliers to report immediately on site status in the event of a disaster. The annual charge for using this system is ¥10.8 million. In addition, use of the supply chain information management system enables better visualization of supplier information (e.g., current location, handled products) on secondary and lower level suppliers. The visualization of the information enables to build a system which allows us to quickly understand the information and risks.

### **Cost of management**

10800000

### **Comment**

## **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?**

Customer

### **Opportunity type**

Products and services

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

Shift in consumer preferences

### **Type of financial impact**

Increased revenue through demand for lower emissions products and services

### **Company-specific description**

Since MMC’s i-MiEV and plug-in hybrid Outlander PHEV do not emit any CO2 when driving with electric power, their environmental performance easily exceeds fuel consumption standards. In recognition of this environmental performance, some countries even offer subsidies for the purchase of MMC’s EVs. Japan, for example, offers a ¥200,000 rebate on the purchase of the Outlander PHEV, as part of its climate change policy (FY2018). Thanks to its original EVs and electrification technology, MMC can expect to be highly competitive in meeting fuel consumption regulations, and also in consumer purchase preferences, due to the offer of rebates or other incentives. We regard the potential to increase MMC vehicle sales due to more favorable consumer preference as a major opportunity for the company.

### **Time horizon**

Medium-term

### **Likelihood**

Virtually certain

### **Magnitude of impact**

High

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

Yes, a single figure estimate

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

88000000000

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

<Not Applicable>

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

<Not Applicable>

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

Due to its excellent environmental performance, the Outlander PHEV qualifies for government purchase subsidies in Japan, Canada and so on. In FY2018, the Company sold 47,000 Outlander PHEVs over the world. Potential financial imapct (88 billion yen) was culculated from the proportion of the market which has incentive program etc.

### **Strategy to realize opportunity**

MMC’s EVs are sold mainly in Japan and Europe. To satisfy the EV fuel consumption standards in these countries and regions and to qualify for incentives, as well as to expand our sales, we are working to increase drive battery capacity and improve electric motor efficiency, to achieve longer driving range. In FY2018, MMC invested a total of 13.2 billion yen in R&D for EVs.

### **Cost to realize opportunity**

13200000000

### **Comment**

### **Identifier**

Opp2

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

Customer

### **Opportunity type**

Products and services

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

Development of climate adaptation and insurance risk solutions

### **Type of financial impact**

Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

### **Company-specific description**

Due to the increase in sea surface temperature caused by climate change, there is a possibility that the probability of occurrence of disaster by heavy rain or typhoon may increase. When a scale and size of a disaster is large, power blackouts and other lifeline service disruptions may occur, driving up demand for emergency power supplies. The electrical energy stored in the drive battery of the MMC’s Outlander PHEV can be used to power household electrical appliances, so it can serve as a backup power supply in an emergency. If the vehicle is fully charged and topped up with gasoline, it can supply enough energy to power a typical household for up to 10 days. A growing recognition of the Outlander PHEV’s ability to serve as an emergency power supply in the event of a power blackout following a disaster could boost sales of the vehicle significantly. MMC sees this potential as an important opportunity.

### **Time horizon**

Medium-term

### **Likelihood**

Virtually certain

### **Magnitude of impact**

High

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

Yes, a single figure estimate

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

74400000000

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

<Not Applicable>

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

<Not Applicable>

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

FY2018 sales revenue from Outlander PHEV vehicles with the power supply feature was aproximately 74.4 billion yen.

### **Strategy to realize opportunity**

To promote the importance and value of MMC EVs more widely, we are configuring MMC dealerships in Japan to serve as “Dendo Drive Station.” In addition to ordinary dealer functions, these dealerships are equipped with EV charging systems powered by PV solar energy and booths to demonstrate how to use EVs as a backup power supply in the event of a disaster. All this will help visitors to understand the power and versatility of MMC’s EVs. As of the end of March 2019 a total of 64 dealerships have been served to Dendo Drive Station. In FY2018 we invested a total of approximately 400 million yen in this initiative.

### **Cost to realize opportunity**

400000000

### **Comment**

Cost of management is related to the development of electric vehicles, an area where we are focusing our efforts on in particular.

### **Identifier**

Opp3

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

Customer

### **Opportunity type**

Products and services

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

Shift in consumer preferences

### **Type of financial impact**

Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

### **Company-specific description**

Japan has suffered repeatedly from disasters attributed to climate change. As a result, increasing importance is now being placed on trying to build social systems capable of preventing human fatalities and of enabling rapid recovery in the event of a disaster. When a disaster occurs, it becomes difficult to acquire gasoline or other fuels, so people struggle to find any means of transportation. In this event, EVs can play a valuable role as a means of transportation, since electricity is typically one of the first lifeline services to be restored. Since the first release of MMC’s Outlander PHEV, for example, we have continued to work on improving its driving range. The current model is capable of traveling 65 km solely on electric power.

### **Time horizon**

Medium-term

### **Likelihood**

Virtually certain

### **Magnitude of impact**

High

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

Yes, a single figure estimate

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

7500000000

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

<Not Applicable>

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

<Not Applicable>

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

The increase in Outlander PHEV sales in Japan from the previous year is approximately 7.5 billion yen.

### **Strategy to realize opportunity**

To inform our stakeholders widely about its Outlander PHEV and other electric powered vehicles, MMC is advertising on TV, radio, and other media, and exhibiting its products at motor shows and other events. In FY2018 MMC spent 20 million yen for environmental and technology exhibitions. There were 150,000 or more visitors at each of these events, enabling MMC to communicate the value of its EVs to large numbers of people.

### **Cost to realize opportunity**

20000000

### **Comment**

## **C2.5**

### **(C2.5) Describe where and how the identified risks and opportunities have impacted your business.**

|  |  |  |
| --- | --- | --- |
|  | **Impact** | **Description** |
| Products and services | Impacted | Since MMC’s i-MiEV and plug-in hybrid Outlander PHEV do not emit any CO2 when driving with electric power, their environmental performance easily exceeds fuel consumption standards.In recognition of this environmental performance, some countries even offer subsidies for the purchase of MMC’s EVs. Japan, for example, offers a ¥200,000 rebate on the purchase of the Outlander PHEV, as part of its climate change policy (FY2018). Thanks to its original EVs and electrification technology, MMC can expect to be highly competitive in meeting fuel consumption regulations, and also in consumer purchase preferences, due to the offer of rebates or other incentives. We regard the potential to increase MMC vehicle sales due to more favorable consumer preference as a major opportunity for the company. In Japan, the increase in Outlander PHEV sales from the previous year is approximately 7.5 billion yen, so the magnitude of this impact is “High." |
| Supply chain and/or value chain | Impacted for some suppliers, facilities, or product lines | Due to the increase in sea surface temperature caused by climate change, at many places around the world in recent years tropical cyclones and tornadoes that pose threats to human life and corporate activities have occurred with increasing frequency. For this reason, there is a risk that the operations of MMC’s suppliers may be disrupted as a result of disaster. In fact, the severe floods that hit western Japan in July 2018 damaged MMC production plants and the facilities of some of its suppliers, resulting in a loss of approximately ¥1.4 billion in operating profit to MMC. If MMC or any of its suppliers are affected by disaster in the future, MMC may face a similar amount of financial damage. The magnitude of this impact is “Medium-high." |
| Adaptation and mitigation activities | Impacted | MMC’s Outlander PHEV is equipped with anti-disaster functions, such as an external power supply function and V2X communication capability. So, by providing protection against the risk of a water disaster due to torrential rain or typhoons, the Outlander PHEV can contribute to climate change adaptation. The above characteristic could be an important factor in increasing the sales of MMC EVs. The financial opportunity arising from this factor is estimated to be worth 74.4 billion yen. The magnitude of this impact is “High." |
| Investment in R&D | Impacted | We are subject to fuel efficiency and CO2 emission regulations in each country where we sell our products and we invest in research and development to comply with revised and new enhanced regulations, In 2018, we invested 13.2 billion yen in the development of electric vehicles. The magnitude of this impact is “High." |
| Operations | Impacted | After the conclusion of the Paris Agreement, the awareness of stakeholders towards climate change has increased dramatically. Vehicles are known as one of the main emission sources of GHG and thus tough countermeasures to combat climate change are required. If product countermeasures or climate change countermeasures in our business activities are inadequate under such as a trend, or if they are not understood sufficiently by stakeholders, our social trust may be damaged, thereby affecting our sales.We have implemented equipment upgrading and other energy conservation investments and promoted the purchase of green energy and these expenditures have led to an increase in business costs. To address the risks of supply-chain disruption, the Company is having its major parts suppliers complete their BCPs and establish measures for resuming production as quickly as possible in the event of a disaster. To monitor its suppliers, the Company shares applicable systems and requires suppliers to report immediately on site status in the event of a disaster. The usage charges of systems are 10.8 million yen a year. The magnitude of this impact is “Low.” |
| Other, please specify | Please select |  |

## **C2.6**

### **(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.**

|  |  |  |
| --- | --- | --- |
|  | **Relevance** | **Description** |
| Revenues | Impacted | Since MMC’s i-MiEV and plug-in hybrid Outlander PHEV do not emit any CO2 when driving with electric power, their environmental performance easily exceeds fuel consumption standards.In recognition of this environmental performance, some countries even offer subsidies for the purchase of MMC’s EVs. Japan, for example, offers a ¥200,000 rebate on the purchase of the Outlander PHEV, as part of its climate change policy (FY2018). Thanks to its original EVs and electrification technology, MMC can expect to be highly competitive in meeting fuel consumption regulations, and also in consumer purchase preferences, due to the offer of rebates or other incentives. We regard the potential to increase MMC vehicle sales due to more favorable consumer preference as a major opportunity for the company. In Japan, the increase in Outlander PHEV sales from the previous year is approximately 7.5 billion yen, so the magnitude of this impact is “High." |
| Operating costs | Impacted | After the conclusion of the Paris Agreement, the awareness of stakeholders towards climate change has increased dramatically. Vehicles are known as one of the main emission sources of GHG and thus tough countermeasures to combat climate change are required. If product countermeasures or climate change countermeasures in our business activities are inadequate under such as a trend, or if they are not understood sufficiently by stakeholders, our social trust may be damaged, thereby affecting our sales.We have implemented equipment upgrading and other energy conservation investments and promoted the purchase of green energy and these expenditures have led to an increase in business costs. To address the risks of supply-chain disruption, the Company is having its major parts suppliers complete their BCPs and establish measures for resuming production as quickly as possible in the event of a disaster. To monitor its suppliers, the Company shares applicable systems and requires suppliers to report immediately on site status in the event of a disaster. The usage charges of systems are 10.8 million yen a year. The magnitude of this impact is “Low.” |
| Capital expenditures / capital allocation | Impacted | We are subject to fuel efficiency and CO2 emission regulations in each country where we sell our products and we invest in research and development to comply with revised and new enhanced regulations, In 2018, we invested 13.2 billion yen in the development of electric vehicles. The magnitude of this impact is “High." |
| Acquisitions and divestments | Not yet impacted | MMC recognizes that the CO2 emission reduction performance of its products and business activities affects how institutional investors rate the company. A number of funds have even announced their intention to withdraw investments from industries and businesses that are deeply involved in fossil fuels. Although MMC has not been impacted by such action as yet, we understand that there are institutional investors interested in our climate change-related initiatives, so we are well aware that such interest can influence our share price and our ability to raise capital in the years ahead. |
| Access to capital | Not yet impacted | MMC recognizes that the CO2 emission reduction performance of its products and business activities affects how institutional investors rate the company. A number of funds have even announced their intention to withdraw investments from industries and businesses that are deeply involved in fossil fuels. Although MMC has not been impacted by such action as yet, we understand that there are institutional investors interested in our climate change-related initiatives, so we are well aware that such interest can influence our share price and our ability to raise capital in the years ahead. |
| Assets | Impacted | We are subject to fuel efficiency and CO2 emission regulations in each country where we sell our products and we invest in research and development to comply with revised and new enhanced regulations, In 2018, we invested 13.2 billion yen in the development of electric vehicles. The magnitude of this impact is “High." |
| Liabilities | Impacted | In EU, where MMC sells products, it may face financial penalties amounting to approximately 95 € (11,400 yen) every 1g of CO2 emitted when a vehicle driving 1 km if MMC cannot meet the fuel consumption standards. It sells approximately 200 thousand vehicles in EU, so estimated financial penalties amounting is 2.7 billion yen. The magnitude of this impact is “Medium-high." |
| Other | Please select |  |

## **C3. Business Strategy**

## **C3.1**

### **(C3.1) Are climate-related issues integrated into your business strategy?**

Yes

## **C3.1a**

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

Yes, qualitative

## **C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b**

### **(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.**

No, we do not have a low-carbon transition plan

## **C3.1c**

### **(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.**

### **i. A company-specific explanation of how business objectives and strategy have been influenced by climate-related issues**

MMC regards its Board of Directors as the highest authority regarding important decisions relating to business management. Decision-making directly below the Board of Directors is handled by the Executive Committee. MMC has also set up a CSR Management Committee, which reports to the Executive Committee. Responses to climate change issues are discussed by the CSR Management Committee, after which important matters are referred to the Executive Committee for further deliberation. The CSR Management Committees is made up of board members appointed by the CEO and other relevant executives and general managers.

In this committee, the participants share long-term environmental trends including COP21, deliberate on the mid-term plan, “Drive for Growth”, to deal with environmental issues with a focus on climate change countermeasures based on a common awareness, and to propose and decide on the plan. The current mid-term plan is the “Environment Initiative Program 2019” which defines the initiatives and plans to be implemented during the period of the mid-term business plan until the year 2019. This plan was released in March 2018 to define the initiatives and plans to deal with environmental issues, including a plan to reduce CO2 emissions during production, office operations, distribution and use of the product.

The CSR Management Committee monitors progress in meeting CO2 emission reduction targets in each fiscal year by each division of the company, as defined in the Environment Initiative Program 2019. For targets that have not yet been met, the CSR Management Committee deliberates on appropriate countermeasures and reports the results to the Executive Committee. As examples of measures taken to help meet targets, we have increased the proportion of fuel-efficient vehicles in our product rollout plan and increased investment on reducing energy use. Like this, our product strategy and investment plans are influenced by climate-related concerns.

### **ii. Explanation of whether your business strategy is linked to an emissions reductions target or energy reduction target**

The “Environment Initiative Program 2019” is linked to the investment and expenditure plan, product rollout plan and model development plan under the mid-term business plan “Drive for Growth”. For example, one of the targets defined in our Environment Initiative Program 2019 is to reduce CO2 emissions (while driving) per new vehicle sold by MMC to 8% below the 2010 level. An effective way to reduce CO2 emissions (while driving) per vehicle is to promote more widespread use of EVs powered by rechargeable batteries. Therefore, MMC is working to continually improve the Outlander PHEV, one of its EVs, and also, as part of its business strategy, to increase sales of this product in Japan and Europe.

### **iii. What have been the most substantial business decisions made during the reporting year that have been influenced by the climate change driven aspects of the strategy**

In September 2018 MMC examined a variety of social issues that need to be tackled for the realization of a sustainable society and identified 15 issues that have the potential to seriously impact the company and its stakeholders as important CSR materialities. Of these 15 selected issues, MMC regards “response to climate change and energy issues” as the company’s most important issue. One of our key initiatives for tackling this issue is to promote product development aimed at reducing vehicle CO2 emissions, and this is influencing our product strategy. In FY2018 we also engaged the support of external consultants to help us in conducting experimental scenario analyses.

## **C3.1d**

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

|  |  |
| --- | --- |
| **Climate-related scenarios** | **Details** |
| 2DS  Other, please specify (4DS) | MMC has conducted scenario analysis processes in fields related to EVs. The time axis of our scenarios extends to 2030. This time frame corresponds to the period referred to by SBT (Science Based Targets, an international initiative) as a requirement for scientific consistency in setting GHG reduction targets for corporate GHG emissions for achieving the 2C goal. Some detail of the scenario analysis conducted by MMC is given below. Methodology: The scenarios used by MMC for analysis are 2DS and 4DS (2-degree and 4-degree scenario). • Under 2DS it is assumed that the frequency of natural disasters is the same as at present (in terms of the magnitude of financial damage) and that adoption of renewable energy and the spread of EVs continues to advance steadily. More specifically, we assumed that the proportion of Japan’s energy consumption from renewables increases to 22% and that annual global sales of EVs increase to 17.6 million units. • Under 4DS we assumed that the cost of fossil fuels increases, that the frequency and financial cost of natural disasters also increases, and that the spread of EVs continues at the present rate. More specifically, we assumed that petroleum becomes 2.5 times more expensive and that natural disasters occur 3.5 times more frequently. Analysis results • Impact on business under 2DS: MMC envisions the risk that the cost of procuring energy to the company will rise due to the addition of a “carbon price” to the cost of thermal power generation. At the same time, it also foresees opportunities for the company, to increase market share as sales of EVs continue growing, due to the worldwide interest in eco-friendly technologies and the availability of subsidies from governments for the development of EV batteries and other technologies. • Impact on business under 4DS: MMC envisions the risk that the increasing likelihood that its suppliers’ operations are disrupted due to the physical damage caused by increasingly frequent natural disasters will lead to a deteriorating operating environment and reduced profits for the company. Impact on business (case studies) The results of MMC’s scenario analysis take into consideration not only changes in natural disasters due to climate change and changes in energy trends, but also the high cost of adaptation in the event that new concepts and technologies impacting the approach of automobile industry such as CASE (Connected, Autonomous, Shared, Electric) and MaaS (Mobility as a Service) take root and become widely implemented. The analysis results will therefore influence our next medium-term plan, which we are currently formulating, as well as the details of our long-term environment-related strategy. |

## **C4. Targets and performance**

## **C4.1**

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

Intensity target

## **C4.1b**

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

### **Target reference number**

Int 1

### **Scope**

Scope 1 +2 (market-based)

### **% emissions in Scope**

88

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

37

### **Metric**

Metric tons CO2e per unit of production

### **Base year**

2005

### **Start year**

2017

### **Normalized base year emissions covered by target (metric tons CO2e)**

0.624

### **Target year**

2019

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

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

### **% of target achieved**

100

### **Target status**

Achieved

### **Please explain**

This goal focuses on CO2 emitted as a result of MMC’s automobile business activities from its production facilities.

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

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

0

## **C4.2**

### **(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.**

## **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\* | 19 | 2458 |
| Implementation commenced\* | 0 | 0 |
| Implemented\* | 26 | 16464 |
| 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 type**

Energy efficiency: Building services

### **Description of initiative**

Lighting

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

1048

### **Scope**

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

19461560

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

80381000

### **Payback period**

4 - 10 years

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

11-15 years

### **Comment**

### **Initiative type**

Energy efficiency: Processes

### **Description of initiative**

Machine replacement

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

173

### **Scope**

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

3535607

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

48316000

### **Payback period**

11-15 years

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

6-10 years

### **Comment**

### **Initiative type**

Energy efficiency: Processes

### **Description of initiative**

Process optimization

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

1352

### **Scope**

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

30873357

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

0

### **Payback period**

No payback

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

6-10 years

### **Comment**

### **Initiative type**

Process emissions reductions

### **Description of initiative**

Changes in operations

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

11578

### **Scope**

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

232321621

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

0

### **Payback period**

No payback

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

6-10 years

### **Comment**

### **Initiative type**

Process emissions reductions

### **Description of initiative**

Changes in operations

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

2313

### **Scope**

Scope 1

### **Voluntary/Mandatory**

Voluntary

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

66870801

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

0

### **Payback period**

No payback

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

6-10 years

### **Comment**

## **C4.3c**

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

|  |  |
| --- | --- |
| **Method** | **Comment** |
| Dedicated budget for energy efficiency | The Company’s yearly business plans include budget resources for efforts to reduce CO2 emissions. |

## **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**

Group of products

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

MMC produces and sells two EV i-MiEV and the plug-in hybrid Outlander PHEV.

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

Low-carbon product and avoided emissions

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

Other, please specify (MMC implements product LCA (life cycle assessment) to confirm that the CO2 emissions of its products over their whole life cycle are lower than those of conventional vehicles.)

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

4

### **Comment**

## **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 2010

### **Base year end**

March 31 2011

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

166855

### **Comment**

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

### **Base year start**

April 1 2010

### **Base year end**

March 31 2011

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

487822

### **Comment**

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

### **Base year start**

April 1 2010

### **Base year end**

March 31 2011

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

374521

### **Comment**

## **C5.2**

### **(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.**

Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superceded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)

## **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)**

66417

### **Start date**

April 1 2018

### **End date**

March 31 2019

### **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**

## **C6.3**

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

### **Reporting year**

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

418992

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

451318

### **Start date**

April 1 2018

### **End date**

March 31 2019

### **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?**

Yes

## **C6.4a**

### **(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.**

### **Source**

The values include figures for all consolidated subsidiaries responsible for vehicle/part production and larger consolidated sales companies, but the information does not include data for smaller consolidated subsidiaries. The totals for affiliates follow a similar pattern, as well: While the values include figures for major affiliates, there are some affiliates (Chinese engine production companies, for example) whose figures are not part of the total. We consider the infuluence is not so important.

### **Relevance of Scope 1 emissions from this source**

Emissions are not relevant

### **Relevance of location-based Scope 2 emissions from this source**

Emissions are not relevant

### **Relevance of market-based Scope 2 emissions from this source (if applicable)**

Emissions are not relevant

### **Explain why this source is excluded**

In the Company’s estimation, smaller consolidated subsidiaries generate minimal emissions and thus warrant exclusion. The Company is currently expanding the scope of affiliates for inclusion in the values.

## **C6.5**

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

### **Purchased goods and services**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

6899555

### **Emissions calculation methodology**

Σ(Purchase Cost of material × Emissions factors ). Emissions factors are referred from the data base published by “Ministry of Environment” and “Ministry of Economy, Trading and Industry.” This figure depends on consolidated basis.

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

### **Explanation**

### **Capital goods**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

407405

### **Emissions calculation methodology**

Σ( Property Increase × Emissions factors). Emissions factors are referred from the data base published by “Ministry of Environment” and “Ministry of Economy, Trading and Industry.” This figure depends on non-consolidated basis.

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

### **Explanation**

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

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

20586

### **Emissions calculation methodology**

Σ(Consumption amount of fuels, electricity, steam, water × Emissions factors). Emission factors are referred from CFP (Carbon Footprint of Products) Program data base. This figure depends on consolidated basis.

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

### **Explanation**

### **Upstream transportation and distribution**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

1277592

### **Emissions calculation methodology**

We calculate CO2 emissions according to "Act on the Rational Use of Energy," based on the volume of distribution and the fuel economy. Σ(Cost of marine transport from the plant in Japan, Thailand and China × Emissions factors). Emissions factors are referred from the data base published by “Ministry of Environment” and “Ministry of Economy, Trading and Industry.” This figure depends on consolidated basis.

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

### **Explanation**

### **Waste generated in operations**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

19343

### **Emissions calculation methodology**

Σ(Intermediate treatment amount by waste category × Emissions factors). Emissions factors are referred from the data base published by “Ministry of Environment” and “Ministry of Economy, Trading and Industry.” This figure depends on non-consolidated basis.

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

### **Explanation**

### **Business travel**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

4071

### **Emissions calculation methodology**

Number of employee × Emissions factors. Emissions factors are referred from the data base published by “Ministry of Environment” and “Ministry of Economy, Trading and Industry.” This figure depends on consolidated basis.

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

### **Explanation**

### **Employee commuting**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

13778

### **Emissions calculation methodology**

Σ(Number of employees by facilities or countries × Emissions factors). Emissions factors are referred from the data base published by “Ministry of Environment” and “Ministry of Economy, Trading and Industry.” This figure depends on consolidated basis.

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

### **Explanation**

### **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>

### **Explanation**

Included in scope 1 and 2 emissions.

### **Downstream transportation and distribution**

### **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>

### **Explanation**

Included in scope3 category 4 emissions.

### **Processing of sold products**

### **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>

### **Explanation**

Included in scope 1 and 2 emissions.

### **Use of sold products**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

33198740

### **Emissions calculation methodology**

Σ(Number of sold vehicle × estimated travel distance in the life of the vehicle × CO2 emissions per travel distance). This calculation covers all markets.

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

### **Explanation**

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

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

727235

### **Emissions calculation methodology**

Σ(Number of sold vehicle × vehicle weight × Emissions factors). This calculation covers all markets.

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

### **Explanation**

### **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>

### **Explanation**

Included in scope 1 and 2 emissions.

### **Franchises**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

12183

### **Emissions calculation methodology**

Total CO2 emissions emitted by some independent dealerships in Japan.

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

### **Explanation**

### **Investments**

### **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>

### **Explanation**

We have no investments to calculate for this category.

### **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>

### **Explanation**

### **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>

### **Explanation**

## **C6.7**

### **(C6.7) Are carbon dioxide emissions from biologically sequestered 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**

0.206

### **Metric numerator (Gross global combined Scope 1 and 2 emissions)**

517735

### **Metric denominator**

Other, please specify (Unit total revenue (million yen))

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

2514594

### **Scope 2 figure used**

Market-based

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

16

### **Direction of change**

Decreased

### **Reason for change**

Due to increased production and sales, operation efficiency has become better than previous year.

### **Intensity figure**

0.439

### **Metric numerator (Gross global combined Scope 1 and 2 emissions)**

517735

### **Metric denominator**

vehicle produced

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

1179075

### **Scope 2 figure used**

Market-based

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

6

### **Direction of change**

Decreased

### **Reason for change**

Due to increased production and sales, operation efficiency has become better than previous year.

## **C7. Emissions breakdowns**

## **C7.1**

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

Yes

## **C7.1a**

### **(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).**

|  |  |  |
| --- | --- | --- |
| **Greenhouse gas** | **Scope 1 emissions (metric tons of CO2e)** | **GWP Reference** |
| CO2 | 66417 | IPCC Fifth Assessment Report (AR5 – 100 year) |

## **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 | 25929 |
| Thailand | 15324 |
| Philippines | 1847 |
| United States of America | 657 |
| New Zealand | 46 |
| Australia | 584 |
| Netherlands | 504 |
| Germany | 289 |
| Indonesia | 3076 |
| China | 18161 |

## **C7.3**

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

By activity

## **C7.3c**

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

|  |  |
| --- | --- |
| **Activity** | **Scope 1 emissions (metric tons CO2e)** |
| Production | 57473 |
| Non-production | 8944 |

## **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 generation 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 (downstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Steel production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Transport OEM activities | 66417 | <Not Applicable> |  |
| 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 in market-based approach (MWh)** |
| Japan | 289128 | 313240 | 564704 | 2869 |
| Thailand | 63277 | 56417 | 118275 | 0 |
| Philippines | 16394 | 16394 | 27009 | 0 |
| United States of America | 2437 | 2189 | 5054 | 0 |
| Puerto Rico | 209 | 55 | 259 | 0 |
| New Zealand | 120 | 54 | 511 | 0 |
| Australia | 899 | 792 | 1043 | 0 |
| United Arab Emirates | 515 | 386 | 585 | 0 |
| Netherlands | 0 | 0 | 1633 | 1633 |
| Germany | 14 | 20 | 1035 | 989 |
| Indonesia | 29475 | 29475 | 40432 | 0 |
| China | 16524 | 32296 | 51509 | 0 |

## **C7.6**

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

By activity

## **C7.6c**

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

|  |  |  |
| --- | --- | --- |
| **Activity** | **Scope 2, location-based emissions (metric tons CO2e)** | **Scope 2, market-based emissions (metric tons CO2e)** |
| Production | 367587 | 396547 |
| Non-production | 51405 | 54771 |

## **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 (downstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Steel production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Transport OEM activities | 418992 | 451318 |  |
| 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**

0.000178

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

33198740

### **Metric denominator**

p.km

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

186000000000

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

8

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

1244000

### **Vehicle lifetime in years**

15

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

10000

### **Load factor**

In our internal metric, neither passenger numbers nor cargo amount are not consider in calculation for the intensity of Scope 3 category 11. Therefore, load factor is considered as 1.

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

In calculating the Scope 3 Category 11 emissions, the numerator is the CO2 emissions of the product per unit of drive distance for each model, multiplied by the lifetime in years and the anticipated annual drive distance. These figures for all models are then added together. The denominator is the aggregate of the lifetimes in years multiplied by the anticipated annual drive distance for each model. (Since the number of passengers is not taken into account in the calculation, a load factor of 1 is assumed.)

## **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 | 1568 | Decreased | 0 | (CO2 emissions in FY2017 in facility whose comsumption of renewable energy has increased for FY2018)/(CO2 emissions in FY2017) =1568t/539919t=-0.3% |
| Other emissions reduction activities | 16464 | Decreased | 3 | Last year 16,464 tCO2 were reduced by our emissions reduction projects, and our total S1 and S2 emissions during the previous year was 539,919 tCO2e, therefore we arrived at 4% through (16,464/ 539,919)\*100= 3% |
| Divestment | 0 | No change | 0 |  |
| Acquisitions | 0 | No change | 0 |  |
| Mergers | 0 | No change | 0 |  |
| Change in output | 119494 | Increased | 22 | ((The number of vehicle produced in fiscal 2018) - (The number of vehicle produced in fiscal 2017))/ (The number of vehicle produced in fiscal 2017) = (1179075 - 965412) / 965412 = 22% . (Emissions in fiscal 2017) × 22% = 119494 t |
| Change in methodology | 0 | No change | 0 |  |
| Change in boundary | 0 | Please select | 0 |  |
| Change in physical operating conditions | 0 | No change | 0 |  |
| Unidentified | 0 | No change | 0 |  |
| Other | 123646 | Decreased | 22 | Changes which were not included other reason are shown. This change is considered to be operational efficiency improvement with increase of production volume. |

## **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 undertakes this energy-related activity** |
| Consumption of fuel (excluding feedstocks) | Yes |
| Consumption of purchased or acquired electricity | Yes |
| Consumption of purchased or acquired heat | No |
| Consumption of purchased or acquired steam | Yes |
| Consumption of purchased or acquired cooling | No |
| 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 MWh** |
| Consumption of fuel (excluding feedstock) | HHV (higher heating value) | 0 | 621898 | 621898 |
| Consumption of purchased or acquired electricity | <Not Applicable> | 5491 | 806515 | 812006 |
| Consumption of purchased or acquired heat | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of purchased or acquired steam | <Not Applicable> | 0 | 24302 | 24302 |
| Consumption of purchased or acquired cooling | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of self-generated non-fuel renewable energy | <Not Applicable> | 43 | <Not Applicable> | 43 |
| Total energy consumption | <Not Applicable> | 5534 | 1452715 | 1458249 |

## **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 | No |

## **C8.2c**

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

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

Town Gas

### **Heating value**

HHV (higher heating value)

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

363759

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

0

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

363759

### **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**

<Not Applicable>

### **Comment**

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

Natural Gas

### **Heating value**

HHV (higher heating value)

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

134870

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

0

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

134870

### **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**

<Not Applicable>

### **Comment**

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

Kerosene

### **Heating value**

HHV (higher heating value)

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

4901

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

0

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

4901

### **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**

<Not Applicable>

### **Comment**

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

Other, please specify (Heavy oil A)

### **Heating value**

HHV (higher heating value)

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

35115

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

0

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

35115

### **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**

<Not Applicable>

### **Comment**

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

Liquefied Petroleum Gas (LPG)

### **Heating value**

HHV (higher heating value)

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

51586

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

0

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

51586

### **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**

<Not Applicable>

### **Comment**

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

Motor Gasoline

### **Heating value**

HHV (higher heating value)

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

16873

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

0

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

16873

### **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**

<Not Applicable>

### **Comment**

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

Diesel

### **Heating value**

HHV (higher heating value)

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

14794

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

0

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

14794

### **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**

<Not Applicable>

### **Comment**

## **C8.2d**

### **(C8.2d) List the average emission factors of the fuels reported in C8.2c.**

### **Diesel**

### **Emission factor**

2.58

### **Unit**

kg CO2 per liter

### **Emission factor source**

Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superceded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)

### **Comment**

### **Kerosene**

### **Emission factor**

2.49

### **Unit**

kg CO2 per liter

### **Emission factor source**

Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superceded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)

### **Comment**

### **Liquefied Petroleum Gas (LPG)**

### **Emission factor**

3

### **Unit**

metric tons CO2 per metric ton

### **Emission factor source**

Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superceded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)

### **Comment**

### **Motor Gasoline**

### **Emission factor**

2.32

### **Unit**

kg CO2 per liter

### **Emission factor source**

Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superceded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)

### **Comment**

### **Natural Gas**

### **Emission factor**

2.22

### **Unit**

kg CO2 per m3

### **Emission factor source**

Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superceded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)

### **Comment**

### **Town Gas**

### **Emission factor**

2.24

### **Unit**

kg CO2 per m3

### **Emission factor source**

Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superceded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)

### **Comment**

### **Other**

### **Emission factor**

2.71

### **Unit**

kg CO2 per liter

### **Emission factor source**

Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superceded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)

### **Comment**

Heavy oil A

## **C8.2e**

### **(C8.2e) 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 | 43 | 0 | 43 | 43 |
| Heat | 0 | 0 | 0 | 0 |
| Steam | 0 | 0 | 0 | 0 |
| Cooling | 0 | 0 | 0 | 0 |

## **C8.2f**

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

### **Basis for applying a low-carbon emission factor**

Contract with suppliers or utilities ( e.g. green tariff), supported by energy attribute certificates

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

Hydropower

### **Region of consumption of low-carbon electricity, heat, steam or cooling**

Europe

### **MWh consumed associated with low-carbon electricity, heat, steam or cooling**

2622

### **Emission factor (in units of metric tons CO2e per MWh)**

0

### **Comment**

### **Basis for applying a low-carbon emission factor**

Contract with suppliers or utilities ( e.g. green tariff), supported by energy attribute certificates

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

Biomass (including biogas)

### **Region of consumption of low-carbon electricity, heat, steam or cooling**

Asia Pacific

### **MWh consumed associated with low-carbon electricity, heat, steam or cooling**

2869

### **Emission factor (in units of metric tons CO2e per MWh)**

0

### **Comment**

## **C-TO8.4**

### **(C-TO8.4) Provide any efficiency metrics that are appropriate for your organization’s transport products and/or services.**

### **Activity**

Light Duty Vehicles (LDV)

### **Metric figure**

0.18

### **Metric numerator**

Other, please specify (kg-CO2)

### **Metric denominator**

Use phase: Vehicle.km

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

33198740000

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

186000000000

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

8

### **Please explain**

## **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**

Plug-in hybrid vehicle (PHEV)

### **Metric figure**

4

### **Metric unit**

% of total sales

### **Explanation**

MMC positions its electric vehicle as low-carbon transport technology and monitors the percentages of Outlander PHEV sales. The percentages were approximately 4% in FY2018.

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

### **(C-TO9.6/C-TS9.6) What is your investment in research and development (R&D), equipment, products and services and which part of it would you consider a direct investment in the low-carbon transition?**

### **Activity**

Light Duty Vehicles (LDV)

### **Investment start date**

April 1 2018

### **Investment end date**

March 31 2019

### **Investment area**

R&D

### **Technology area**

Electrification

### **Investment maturity**

Applied research and development

### **Investment figure**

565000000

### **Low-carbon investment percentage**

41-60%

### **Please explain**

MMC is investing in R&D aimed at improving the environmental performance of its products. It is investing particularly strongly in vehicle electrification technology.

## **C10. Verification**

## **C10.1**

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

|  |  |
| --- | --- |
|  | **Verification/assurance status** |
| Scope 1 | No third-party verification or assurance |
| Scope 2 (location-based or market-based) | No third-party verification or assurance |
| Scope 3 | No third-party verification or assurance |

## **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?**

No, we do not verify any other climate-related information reported in our CDP disclosure

## **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.**

Japan carbon tax

## **C11.1c**

### **(C11.1c) Complete the following table for each of the tax systems in which you participate.**

### **Japan carbon tax**

### **Period start date**

April 1 2018

### **Period end date**

March 31 2019

### **% of emissions covered by tax**

66

### **Total cost of tax paid**

98019783

### **Comment**

MMC is not directly regulated under any emissions trading scheme, but the energy it purchases from energy providers include taxes for mitigating global warming, so CO2 emission calculations take into account energy usage at all MMC premises in Japan.

## **C11.1d**

### **(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?**

Carbon tax is included in energy costs, so we promote reduction of the indirect burden by carbon tax through energy saving.

## **C11.2**

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

Yes

## **C11.2a**

### **(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.**

### **Credit origination or credit purchase**

Credit purchase

### **Project type**

Energy efficiency: industry

### **Project identification**

Upgrading of boiler in the food factory (Japan J-Credit Scheme: Disaster-Area Reconstruction Assistance J-Credit)

### **Verified to which standard**

Not yet verified

### **Number of credits (metric tonnes CO2e)**

11

### **Number of credits (metric tonnes CO2e): Risk adjusted volume**

11

### **Credits cancelled**

No

### **Purpose, e.g. compliance**

Voluntary Offsetting

## **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, 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**

10

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

85

### **% Scope 3 emissions as reported in C6.5**

9.6

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

MMC participates in the CDP Supply Chain Program and it collects CO2 emissions data and strategy and management information relating to climate change countermeasures from its suppliers. MMC also solicits questionnaire responses from a selection of approximately 150 of its biggest suppliers in Japan (in terms of business transaction value). These suppliers account for over 80% of MMC’s total procurement spend.

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

As part of its effort to address climate-related issues, MMC believes it is important to ensure that its suppliers reduce their CO2 emissions. For this reason, as “measures of success,” we monitor the proportion of suppliers that respond to our questionnaire and the proportion of the total procurement spend that responding suppliers account for.

### **Comment**

The calculation of “% of suppliers by number” and “% of total procurement spend (direct and indirect)” applies only to parts suppliers with which MMC does business.

## **C12.1c**

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

To expand our CO2 emission reduction efforts and other environmental initiatives to the whole of our supply chain, MMC is providing education to our sales companies in Japan. In particular, we encourage them to acquire Eco-Action 21 certification, based on an environmental management system for SMEs promoted by the Ministry of the Environment. In FY 2018, 13 companies were newly certified (the percentage of certified distributors was 26% as of the end of FY 2018).

## **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**

Japan Automobile Manufacturers Association, Inc

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

Consistent

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

The CO2 emissions from the transport sector (including automobiles) account for 17.9% of Japan’s total CO2 emissions (FY2017). In light of this, the Japan Automobile Manufacturers Association (JAMA) is striving to improve the fuel efficiency of passenger vehicles and to limit CO2 emissions in product manufacturing processes. For example, for CO2 emissions from vehicles, JAMA is working to meet fuel efficiency standards and to reduce CO2 emissions, in line with the Japanese government’s 2030 GHG reduction target of 26.0% (below FY2013 level), which corresponds to a reduction of 27.6% in the transport sector.

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

The JAMA Board of Directors includes MMC executives. In addition, the JAMA’s Environment Committee is headed by MMC’s Chief Environmental Strategy Officer, who participates in discussions relating to vehicle fuel efficiency and trends in CO2 emission regulations. Since the MMC executives who are members of the JAMA Board of Directors and Environment Committee can express their opinions as representatives of the company, we are able to influence the positions and decision-making of the JAMA in relation to climate change issues.

## **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?**

The relevant MMC executives and division managers who participate in the JAMA as MMC representatives can share information relating to COP, the Paris Agreement, and other long-term environmental trends with the representatives of other companies. In accordance with such trends, MMC deliberates on the company’s medium-term plan on climate change action and environmental issues in the CSR Management Committee, after which matters are put for decision to the Executive Committee. The MMC executives who attend JAMA meetings are all internal board members as well as executive officers or managers in relevant areas, so all of them are responsible for external PR activities. This ensures consistency between the company’s climate change policies and the external PR activities of the MMC’s various divisions. MMC’s environmental management units receive reports from the MMC executives who participate in the JAMA regarding climate change-related relations and liaisons with relevant government agencies and industry bodies, to ensure that MMC’s policies are consistent company-wide with those of government and industry. Furthermore, MMC also uses its Intranet and online learning applications to keep all of its employees up to date regarding the company’s policies and medium-term action plans.

## **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**

[yuka20190621e.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/Dl-wkGbD9kqAxsivaK4Lgg/yuka20190621e.pdf)

### **Page/Section reference**

The physical risks arising from natural disasters and transition risks due to stricter laws and regulations are described under (3) and (4) of P14 [Business-related risks] of the Annual Securities Report.

### **Content elements**

Risks & opportunities

### **Comment**

### **Publication**

In voluntary sustainability report

### **Status**

Underway – previous year attached

### **Attach the document**

[csr\_report\_2018\_e.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/YMzkgURQNkuYxsUmfGj0IA/csrreport2018e.pdf)

### **Page/Section reference**

### **Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

### **Comment**

## **C14. 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.**

## **C14.1**

### **(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

|  |  |  |
| --- | --- | --- |
|  | **Job title** | **Corresponding job category** |
| Row 1 | Executive Officer, Senior Vice President (Corporate Strategy) | Other C-Suite Officer |