# **Isuzu Motors Limited - Climate Change 2020**

## **C0. Introduction**

## **C0.1**

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

Isuzu has manufactured and sale for Heavy- medium- and light-duty trucks,buses, passenger vehicle engines, industrial-use diesel engines. During our years of operation,we have consistently focused on "creation without compromise" in the process of building Isuzu into the company it is today. And now we are boldly taking up the challenge of global leadership in commercial vehicles and diesel engines while maintaining our traditions. We have No.1 share about commercial Vehicles in Japanese market.

## **C0.2**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Start date** | **End date** | **Indicate if you are providing emissions data for past reporting years** | **Select the number of past reporting years you will be providing emissions data for** |
| Reporting year | April 1 2019 | March 31 2020 | No | <Not Applicable> |

## **C0.3**

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

Japan

Thailand

## **C0.4**

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

JPY

## **C0.5**

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

Financial control

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

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

Heavy Duty Vehicles (HDV)

## **C1. Governance**

## **C1.1**

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

Yes

## **C1.1a**

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

|  |  |
| --- | --- |
| **Position of individual(s)** | **Please explain** |
| Director on board | Director of the Board and Managing Executive Officer, who are members of the Board of Directors, serve as supervisors of the research and development sector. Since they are responsible for the company’s overall environmental activities, including climate change, as the principal members of the Global Environment Committee, they have the greatest responsibility on the Board of Directors regarding climate change. As the head of the Global Environment Committee (GEC) who is responsible for the Isuzu Group’s overall environmental activities, including climate change countermeasures, the director is committed to promoting climate change countermeasures, such as the Isuzu Group’s Charter on the Global Environment that was revised in 2018 and the formulation of environmental vision that was released in March 2020. This vision states that Isuzu aims to become carbon neutral across the product life cycle by 2050, and the GEC will take responsibility for promoting achievement of long-term environmental targets, including climate change countermeasures. |

## **C1.1b**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Frequency with which climate-related issues are a scheduled agenda item** | **Governance mechanisms into which climate-related issues are integrated** | **Scope of board-level oversight** | **Please explain** |
| Scheduled – some meetings | Reviewing and guiding strategy  Reviewing and guiding major plans of action  Reviewing and guiding risk management policies  Reviewing and guiding annual budgets  Reviewing and guiding business plans  Setting performance objectives  Monitoring implementation and performance of objectives  Overseeing major capital expenditures, acquisitions and divestitures  Monitoring and overseeing progress against goals and targets for addressing climate-related issues | <Not Applicable> | The line of reporting within the Isuzu Group concerning environmental issues centers around the Global Environment Committee. Reports to the Board of Directors and to the Management Meeting, the peak decision-making body of the Isuzu Group regarding the execution of business, are regularly made once a year. Additional reports are made as necessary, but the decision whether to submit them to the Board of Directors is made at the Management Meeting. In the reporting year, a report on the activities of the Global Environment Committee was submitted to the Management Meeting by the Senior Executive Officers and a review was made regarding the company’s initiatives regarding overall activities relating to the environment, including climate change. Furthermore, Isuzu Environmental Vision 2050, a long-term vision for 2050 submitted by the Global Environment Committee, was discussed and the objective of aiming to become carbon neutral across the product life cycle by 2050 was approved. |

## **C1.2**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of the position(s) and/or committee(s)** | **Reporting line** | **Responsibility** | **Coverage of responsibility** | **Frequency of reporting to the board on climate-related issues** |
| Safety, Health, Environment and Quality committee | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable> | More frequently than quarterly |

## **C1.2a**

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

The Global Environment Committee (GEC) is chaired by the Director of the Board and Managing Executive Officer in charge of the Engineering Division of the Operation Headquarter, and evaluates risks and opportunities on important environmental issues, including climate change, in the Isuzu Group.

The GEC is composed of representatives of all divisions which form the value chain of the Isuzu Group (the executive officer in charge of each division) as permanent members and strives to reduce environmental impact across the entire value chain.

The Global Environment Committee is convened four times a year, and matters judged to be significant to management strategy are submitted to the peak decision-making body of the Isuzu Group, the Management Meeting.

The Management Meeting, whose membership consists of all executive officers, including the Board of Directors, is positioned as the most important organization for the handling of issues regarding Isuzu’s management. It holds prior discussion and reports on all matters submitted to the Board of Directors.

In the Global Environment Committee (GEC), progress reports on initiatives and performance are made once every quarter and reports are submitted to the Management Meeting and Board of Directors. These climate change countermeasures are handled throughout the company by the Global Environment Committee. The head of the Global Environment Committee, who is a Director of the Board and Managing Executive Officer of the company, promotes these initiatives as the person responsible for climate change countermeasures.

In the reporting year, the GEC discussed the long-term direction of the Isuzu Group’s environmental initiatives, and formulated Isuzu Environmental Vision 2050. This plan was subsequently submitted to the Management Meeting and Board of Directors for approval, before being released publicly in March 2020. Isuzu Environmental Vision 2050 states that Isuzu aims to become carbon neutral across the product life cycle by 2050.

## **C1.3**

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

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

## **C1.3a**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Entitled to incentive** | **Type of incentive** | **Activity inventivized** | **Comment** |
| Board/Executive board | Monetary reward | Emissions reduction target | This is incorporated in the salary of the Senior Executive Officer, who is the head of the Global Environment Committee, as a performance-based reward as the person responsible for environmental measures including climate change countermeasures and for the development of climate change-related technologies. |
| Environment/Sustainability manager | Monetary reward | Behavior change related indicator | The degree of achievement of CO2 reduction and other environmental targets are subject to performance assessment by persons responsible for promoting the environment and CSR. |
| All employees | Monetary reward | Energy reduction project | The Energy Saving 3R Awards staged in February each year during Energy Saving Month , bring together good examples from sites of energy saving activities. Examples of excellence in energy saving are given a monetary prize and the information is shared company-wide |

## **C2. Risks and opportunities**

## **C2.1**

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

Yes

## **C2.1a**

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | **From (years)** | **To (years)** | **Comment** |
| Short-term | 0 | 1 |  |
| Medium-term | 1 | 5 |  |
| Long-term | 5 | 30 |  |

## **C2.1b**

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

Isuzu defines substantive financial impact as follows:

- Operational stoppage of one week or greater due to damage to our plants or assembly plants of our products caused by natural disasters

- Operational stoppage of one month or greater due to simultaneous damage to multiple suppliers caused by natural disasters

- State of progress of all environmental technologies leading to decarbonization, and the trend in our research and development costs related to said technologies (whether R&D expenditure exceeds 5% of sales).

- Change in societal/customer awareness or reputation that leads to 5% or greater change in sales share.

## **C2.2**

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

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

Direct operations

Upstream

Downstream

### **Risk management process**

Integrated into multi-disciplinary company-wide risk management process

### **Frequency of assessment**

More than once a year

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

Short-term

Medium-term

Long-term

### **Description of process**

Significant value-chain environmental risks and opportunities for the Isuzu Group over six years, including climate change, are evaluated by the Global Environment Committee, chaired by the Director of the Board and Managing Executive Officer in charge of the Engineering Division of the Operation Headquarter. The Global Environment Committee is convened four times a year, and matters judged to be significant to management strategy are submitted to the peak decision-making body of the Isuzu Group, the Management Meeting. Climate change countermeasures are recognized to be an important issue in the Isuzu Group. Regarding risks and opportunities that are an extension of existing business, after decisions have been made in each sector, they are submitted to the Management Meeting, discussed, reported and reviewed, and submitted to the Board of Directors when it is deemed necessary. Case study of how the process is applied Physical risk There is growing risk of flooding due to the effects of the latest phenomenon of localized torrential rain, but even in the regions our factories in Japan are located on high ground and direct risk of inundation is thought to be low. However, in the supply chain overall there is a possibility of stoppages to manufacturing from supplier inundation, or delays in supply of components due to inundation of roads surrounding factories, and if inundation from flooding were to continue in the long term there is a possibility of operating risk. We are pursuing a response in relation to ‘soft’ factors such as through prior sharing of production plans and multiple purchasing, so that additional cost from risk has not at this point been incurred. Transition risk Regulatory information about climate change is one of the most important pieces of information in Isuzu Motors and is particularly important for considering sales and business strategies. There are moves - primarily in the developed nations - to make all types of global environmental regulation more stringent, such as fuel economy and GHG standards, and when selling or exporting and importing new vehicles, sales and export-import are not possible without responding to the wishes of each country, such as in relation to cost, and in such a way as to clear each country’s regulations and standards. The Director of the Board and Managing Executive Officer from the Engineering Division and all management levels from Director and above responsible for the Engineering Division participate in the Product Program Conference, where the direction of various activities is considered and progress reports are made on activities, the status of activities is reviewed as needed, and instructions are given about activities going forward.

## **C2.2a**

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

|  |  |  |
| --- | --- | --- |
|  | **Relevance & inclusion** | **Please explain** |
| Current regulation | Relevant, always included | A carbon tax is imposed on fossil fuel-related energy in Japan, which results in an increase of about 4 million yen in business operation costs. As a result, we are promoting energy use reduction activities based on the implementation of energy-saving measures. In fiscal 2018, new emissions regulations took effect. There is a trade-off relationship between emissions reduction and fuel efficiency: reducing emissions tends to decrease fuel efficiency. Therefore, meeting the latest emissions regulations may increase CO2, posing the risk of failing to meet the fuel consumption standard that is coming into force. |
| Emerging regulation | Relevant, always included | In addition to the introduction in California of the Zero Emission Vehicle (ZEV) program and stricter regulations on vehicle CO2 emissions, large vehicles will also become subject to regulations from 2023, and it is becoming difficult to meet regulations via diesel engine trucks alone. Meanwhile, in Europe, it was legislated in July 2019 that large-sized vehicles would also be subject to fuel economy regulations from 2025, determining that fuel economy regulations would be introduced for trucks in the future. Although detailed threshold values are yet to be determined, it is highly likely that it will be difficult to meet regulations via diesel engine trucks alone. |
| Technology | Relevant, always included | In addition to the introduction in California of the Zero Emission Vehicle (ZEV) program and stricter regulations on vehicle CO2 emissions, large vehicles will also become subject to regulations from 2023, and it is becoming difficult to meet regulations via diesel engine trucks alone. A failure to respond to emissions reduction, for example, may lead to a risk of being recognized as something that has a negative impact on environment and eliminated from markets. As Isuzu is aiming to achieve carbon neutrality across the product life cycle, we believe that it is important to not only produce BEVs, but also to achieve decarbonization in the energy sources that they run on. One potential among these is biofuels, and we are working with euglena Co., Ltd., to advance decarbonization in liquid fuels. Going forward, we will work to achieve carbon neutrality by 2050 by utilizing decarbonized energy sources in an efficient manner. |
| Legal | Relevant, always included | Diesel engines, our key products, are more fuel efficient than other internal combustion engines and produce less CO2 emissions. However, emissions from diesel engines have the drawback of containing larger quantities of NOX and PM, which cause urban air pollution. Isuzu has complied with relevant laws and regulations by using diesel particulate filters but had pollution lawsuits in the past; a pollution lawsuit may occur unless measures to reduce emissions are implemented in addition to those to improve fuel efficiency. |
| Market | Relevant, always included | Isuzu thinks that diesel engines are useful for commercial vehicles and will continue to be an important power train in the future. However, since some manufacturers’ cheating on emissions tests for diesel engines, markets have been increasingly severe about diesel engines in general. Although it is a technology with low fuel consumption and low CO2 emissions, a failure to respond to emissions reduction, for example, may lead to a risk of being recognized as something that has a negative impact on environment and eliminated from markets. With respect to heavy-duty trucks, since the requirements for electric vehicles in terms of transportation efficiency and continuous driving distance are not considered to be high at this point, we view xEV as an important future technology field to focus on and are promoting technological development within the company. An urgent task is the further enhancement of the efficiency of natural gas vehicles and internal combustion engines, which is being promoted within the company as an important challenge. |
| Reputation | Relevant, sometimes included | As the climate change issue increases in importance, we are focusing on the progress status of technological development of low-carbon and zero-emissions vehicles as an important issue. If the company cannot respond to these social trends, this will have an adverse impact on our reputation with customers, which may lead to a decline in sales and the weakening of Isuzu’s presence in the market. At the same time, there is a concern that, as a company that is late in implementing climate change countermeasures, Isuzu Motors may cease to be an object of investment. |
| Acute physical | Relevant, always included | In urgent emergency situations such as flooding, mainly the risk to supply chains is high. Since automobiles may be impacted by the lack of just one part, to ensure that there is no impact on operation, response is being promoted mainly by the purchasing sector, such as the addition of flooding and other water risks to supplier surveys and the development of multiple purchase systems. In fiscal 2019, flooding in Japan hit suppliers, beginning to affect operation, including a temporary adjustment of production. |
| Chronic physical | Relevant, always included | As summers grow significantly hotter through the chronic rise in summer temperatures, there is an increasing air-conditioning burden at production plants and responses such as revising electricity supply contracts with power supply companies may become necessary. Due to the extremely hot summer this year, damages through breach of contract have reached a maximum of 2 million yen. |

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

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

### **Primary potential financial impact**

Increased indirect (operating) costs

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

<Not Applicable>

### **Company-specific description**

Regulatory information about climate change is one of the most important pieces of information in Isuzu Motors and is particularly important for considering sales and business strategies. There are moves - primarily in the developed nations - to make all types of global environmental regulation more stringent, such as fuel economy and GHG standards, and when selling or exporting and importing new vehicles, sales and export-import are not possible without responding to the wishes of each country, such as in relation to cost, and in such a way as to clear each country’s regulations and standards. The effect in response to these various regulatory and standard setting measures has been our proactive pursuit of development of environmental technologies, which resulted in fiscal 2019 in research and development costs that included those measures, of 98.1 billion yen, a roughly 7 percent increase over the last five years. In fiscal 2018, Japan’s new emissions regulations, which are one of the most stringent in the world, took effect. Although in diesel engines, Isuzu’s key power train products, there is an inherent trade-off relationship between emissions and fuel efficiency (CO2 emissions), both clean emissions and low fuel consumption need to be achieved. Developing technologies for exhaust gas treatment equipment as well as technologies for improving fuel efficiency constitute important climate change countermeasures. The technological advantage of internal combustion engines in commercial vehicles is likely to remain; thus, the decision was made to form a comprehensive business partnership with Cummins Inc., a global diesel engine manufacturer, for the power train business. The partnership may develop into a capital alliance in the future. Furthermore, the company is considering investing about 350 billion yen in advanced technology fields, including the environment. Isuzu sets its research and development expenditure at 5% of total sales. However, in recent years advance investments in environmental technologies, etc., have seen our R&D expenditure/sales ratio exceed this figure. If this increased level of investment continues, there is the risk of negative impact to the company’s financial standing. However, there is also a risk that holding back investment may see the company left behind in technological competition. As such, investment continues to represent a difficult management decision.

### **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)**

98100000000

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

<Not Applicable>

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

<Not Applicable>

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

More stringent regulation of environmental and other issues has caused the cost of research and development to spend 99.0 billion yen in 2018 , 98.1 billion yen in 2019, and has led to constrained financial circumstances. If deliverables are not commensurate with investment there are concerns for a worsening of performance and financial circumstances. With the cost of the advanced technological developments, such as those in the environmental field, currently high and this level expected to continue going forward, from the current fiscal year we have begun a technology partnership with the Volvo Group in order to proceed with advanced technological development in an efficient manner.

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

255000000000

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

By equipping our Elf light-duty truck with a newly-developed 4JZ1 engine that meets the new severe exhaust gas regulations, we have improved fuel consumption while responding to the world’s most severe exhaust gas regulations. In 2018, Japan’s new emissions regulations took effect. In response to that, Elf, our new light-duty truck, was launched. Despite a trade-off relationship between emissions and fuel efficiency (CO2 emissions), the new Elf achieved both clean emissions and low fuel consumption by improving exhaust-gas aftertreatment devices, including exhaust gas treatment equipment, at the same time. In fiscal 2018, we pursued the research and development of xEV by, for example, providing some monitor customers with BEVs. In order to effectively pursue the research and development of xEV, we conduct basic research necessary for xEV while curbing research and development costs by participating in EV C.A. Spirit in the fields where we can use common modules. Through the participation, a new investment of about 5 billion yen was made, including dispatching engineers. We concluded a partnership agreement with Volvo, including an agreement to purchase UD Trucks for 250 billion yen, and we are also currently in discussions with Volvo with a view to continuing our partnership on advanced technological development going forward. In other developments, during the last fiscal year we also entered into a partnership with U.S. company Cummins Inc. to leverage both companies' technical strengths in development of internal-combustion engines. In this way, we are working to reduce rising R&D costs by collaborating with not only companies in the same industry but also with partners from a variety of industries to develop advanced technologies while minimizing the associated investment burden. Although electrification of vehicles including EVs may have advantages in some areas for vehicles such as light commercial vehicles, we will maintain and implement strategies focused on internal combustion engines for inter-city transportation.

### **Comment**

### **Identifier**

Risk 2

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

Upstream

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

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

### **Primary potential financial impact**

Decreased revenues due to reduced production capacity

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

<Not Applicable>

### **Company-specific description**

There is growing risk of flooding due to the effects of the latest phenomenon of localized torrential rain, but even in the regions our factories in Japan are located on high ground and direct risk of inundation is thought to be low. However, in the supply chain overall there is a possibility of stoppages to manufacturing from supplier inundation, or delays in supply of components due to inundation of roads surrounding factories, and if inundation from flooding were to continue in the long term there is a possibility of operating risk. In the flooding that occurred in Japan in fiscal 2018, stoppages lasted only several days; countermeasures were implemented including revising production plans and arranging transfers. However, in case production stops for a week or longer, significant revisions of plans will be required. The effect of the 2011 flooding that occurred in Thailand caused operations to shut down for about a month due to delays in supply of components.

### **Time horizon**

Medium-term

### **Likelihood**

About as likely as not

### **Magnitude of impact**

Medium-low

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

Yes, a single figure estimate

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

5000000000

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

<Not Applicable>

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

<Not Applicable>

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

Because our factories are located on high ground, direct damage from flooding is thought to be limited, but it is conceivable that operating risk could arise in factories from inundation at component suppliers, or from congestion in the traffic network.On a turnover basis, at a maximum, five billion yen per day of damage could occur at each plant as a result of operational stoppage due to the impact of production declines.

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

0

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

Sharing production plans in advance with key suppliers not only ensures systematic operation, but also makes it possible generally to address short-term flood damage lasting about a week. However, given long term impact on components and operations, with the exception of a portion of components, we reduce risk by purchasing from multiple suppliers In the flooding that occurred in Japan in fiscal 2018, stoppages lasted only several days thanks to component procurement based on purchase agreements with multiple companies; countermeasures were implemented including revising production plans and arranging transfers. In case production stops for a long period, support is provided toward prompt restoration, including dispatching the company’s engineers, which are deliberated/reported in the Management Meeting. We are pursuing a response in relation to ‘soft’ factors such as through prior sharing of production plans and multiple purchasing, so that additional cost from risk has not at this point been incurred. These matters are deliberated/reported in the Management Meeting as needed depending on the magnitude of the damage and other factors; detailed responses are considered on a case-by-case basis.

### **Comment**

### **Identifier**

Risk 3

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

Downstream

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

|  |  |
| --- | --- |
| Market | Changing customer behavior |

### **Primary potential financial impact**

Decreased revenues due to reduced demand for products and services

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

<Not Applicable>

### **Company-specific description**

Trucks and buses, which Isuzu produces, are purchased by companies, unlike passenger vehicles. The fuel efficiency of a product may have a direct impact on costs incurred by the company and thus constitutes a crucial factor that directly affects decision-making on purchase. Commercial vehicles are typically considered to operate over longer distances than passenger vehicles and to use more fuel than passenger vehicles. For that reason, the customer perspective in fuel cost competition with competing companies is to seek fuel cost performance that exceeds regulated values. For example, in light trucks currently being sold we are showing figures in fuel cost that is superior to national regulations and standards by ten percent or more, but other companies are showing fuel costs that are close to similar levels, and if a product were to be sold that exceeded our fuel cost values, it would be likely to affect sales.

### **Time horizon**

Long-term

### **Likelihood**

Virtually certain

### **Magnitude of impact**

Medium-low

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

Yes, a single figure estimate

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

100000000000

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

<Not Applicable>

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

<Not Applicable>

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

The sales pitch we use at Isuzu Motors in our sales activities is “Low Fuel consumption No. 1” and for 18 consecutive years we have been number one in sales in the light truck sector, but in the sector with the most appeal to customers - commercial vehicles – if we were to fall behind competing companies, it could have the effect of a sales share of between only one and five percent and sales volumes of 1000 to 5000 vehicles a year. In terms of turnover, there is a risk of loss of the scale of up to 100 billion yen.

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

350000000000

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

In commercial vehicles, whether the product is fuel-efficient or not is one of the major factors in making a purchasing decision. Therefore, we place advertisements that highlight “Low fuel consumption No. 1” as we regard the benefit of “being fuel-efficient” as a key pillar of our sales strategy. Since fuel efficiency is an important factor in our sales strategy, Isuzu allocates substantial management resources to the technological development of fuel efficiency. In 2018, Japan’s new emissions regulations took effect. In response to that, Elf, our new light-duty truck, was launched. Despite a trade-off relationship between emissions and fuel efficiency (CO2 emissions), the new Elf achieved both clean emissions and low fuel consumption by improving exhaust-gas aftertreatment devices, including exhaust gas treatment equipment, at the same time. Because the cost of development associated with such measures as fuel economy improvement and fuel conversion is a topic for technical development applicable not just to individual vehicle models, but to multiple models, development costs cannot be derived for development for individual models, but costs like these associated with the environment that have arisen are in the order of 40 billion yen.Furthermore, over the next three years, we are planning to invest 350 billion yen as growth investment including climate change countermeasures.

### **Comment**

The costs of these countermeasures are based on the amount of investment that is internally considered necessary to deal with risks in the future with the assumption that the goals stated in the mid-term business plan, i.e., sales of 2,200 to 2,300 billion yen, an operating profit of 9%, and an ROE of 12%, are achieved. The management situation may change depending on the business situation in the future.

## **C2.4**

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

Yes

## **C2.4a**

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

### **Identifier**

Opp1

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

Downstream

### **Opportunity type**

Products and services

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

Development and/or expansion of low emission goods and services

### **Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

### **Company-specific description**

Regulatory information about climate change is one of the most important pieces of information in Isuzu Motors and is particularly important for considering sales and business strategies. Isuzu Motors has as the goal of its activities Low fuel consumption No. 1 and in the many fields in which we are active in Japan we have secured the position of fuel economy number 1, and are building our brand value as a company with technology that is superior to the competition. As a result, in light trucks (two to three ton class) we have maintained number one in Japanese domestic share for 18 consecutive years. In addition, as a responsibility of automobile manufacturers, mainly diesel, we are collaborating on aptitude testing of bio fuels as an alternative to petroleum (Euglena from microbes). Isuzu offers connected services called PREISM that uses the MIMAMORI telematics system. These are services that monitor and record vehicle conditions all the time and notify the driver of any abnormality detected in important aspects of vehicle operation before a trouble occurs. Using the services prevent the vehicle from traveling with insufficient maintenance, failing to deliver vehicle performance, and thus generating CO2 in large quantities. These services are thought to be highly compatible with electric motor cars, and their further utilization is being considered. Investments in these connected services are positioned as part of investments of up to 350 billion yen that are made over the next three years in the fields with growth potential and the environmental field which includes climate change.

### **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)**

70000000000

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

<Not Applicable>

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

<Not Applicable>

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

The sales pitch we use at Isuzu Motors in our sales activities is “Low Fuel consumption No. 1” and for 19 consecutive years we have been number one in sales in the light truck sector, but in the sector with the most appeal to customers - commercial vehicles – if we were to fall behind competing companies, it could have the effect of a sales share of between only one and five percent and sales volumes of 1000 to 5000 vehicles a year.In terms of turnover, there is a opportunity of increase of the scale of up to 7000 billion yen every year. Over the long term, collaboration in biodiesel development will lead to the rapid development of biodiesel technologies , and this will enable us to not only maximize the use of existing technologies but also distinguish ourselves from the competition. If our global market share were to change by 1%, this would represent a sales volume of around 1000 vehicles per year, and although it is not possible to give a clear financial impact as we sell a wide range of vehicles varying in price from 5 million yen to over 100 million yen for special vehicles, calculated at 7 million yen per unit for one of our bestselling vehicles, this would represent approximately 700 billion yen in increased revenue.

### **Cost to realize opportunity**

40000000000

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

In 2018, Japan’s new emissions regulations took effect. In response to that, Elf, our new light-duty truck, was launched. Despite a trade-off relationship between emissions and fuel economy , the new Elf achieved both clean emissions and low fuel consumption by improving exhaust-gas aftertreatment devices. Dependence on petroleum-based fuels is expected to decrease over the long term, and cooperation in biodiesel development that achieves decarbonization while maintaining the use of existing infrastructure will enable the rapid development of biodiesel technologies. Because the cost of development associated with such measures as fuel economy improvement and fuel conversion is a topic for technical development applicable not just to individual vehicle models, but costs like these associated with the environment that have arisen are in the order of 40 billion yen. For transportation companies, which are our customers, productivity declines mostly when they cannot use trucks for a long period of time due to a trouble. The connected services PREISM that uses the MIMAMORI system early detects components that are likely to fail and notifies the client, enabling the truck to be stopped in a planned manner and reducing the risk of facing non-operation of the truck for a long period of time. The services, which are installed in all of our trucks as the standard feature to promote the utilization of this technology and improve customer trust, contribute to increasing sales.

### **Comment**

### **Identifier**

Opp2

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

Downstream

### **Opportunity type**

Products and services

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

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

### **Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

### **Company-specific description**

Isuzu Motors is the only domestic vehicle manufacturer and seller of natural gas commercial vehicles, Natural gas has a high energy density compared with other energies, and we see it as a fuel that potentially contributes to climate change countermeasures as one of low-CO2 fuels used for commercial vehicles. and in these days of extreme rainfall creating impasse in the traffic network and energy grid, there are gas pipes for natural gas buried underground so that were there to be natural disasters such as flooding or land slides that created impasse in regional traffic networks, natural gas trucks could still operate. Currently natural gas vehicles have been positioned in policy in Japan in the configuration of traffic networks that are resistant to disasters and going forward it is likely they will continue to grow share.

### **Time horizon**

Medium-term

### **Likelihood**

Likely

### **Magnitude of impact**

Medium

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

Yes, a single figure estimate

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

5000000000

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

<Not Applicable>

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

<Not Applicable>

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

As the only vehicle manufacturer in Japan to supply natural gas trucks that use natural gas, which is lower in carbon than petroleum derived fuels, we have not only sold conventional light and medium sized trucks, but also large trucks. This financial year we anticipate subsidies from the Ministry of the Environment for low carbon trucks and natural gas vehicles have been positioned as an element in the configuration of traffic networks that are resistant to disasters, so that while we achieved sales of large natural gas trucks last year, going forward we anticipate further growth in share to several hundred vehicles a year. Ultimately our goal is to increase sales of large natural gas trucks to approximately 100 vehicles per year, which could increase sales by as much as JPY 5 billion.

### **Cost to realize opportunity**

40000000000

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

In relation to the promotion and uptake of natural gas vehicles, the director responsible for external affairs attends the Natural Gas Vehicle Liaison Meeting convened each Wednesday, where stakeholders share investigations into the promotion and uptake of natural gas vehicles and internally, liaison activities are being pursued as an important pillar of whole-of-company external affairs activities. In fiscal 2018, in the field of trucks fueled by natural gas, which is a low-carbon fuel, a demonstration driving test on public roads was conducted using a Japan’s first large liquefied natural gas (LNG) truck with support from the Ministry of the Environment. This was a demonstration test to achieve a driving distance of 1,000 km or longer by making use of the advantage of natural gas trucks, i.e., CO2 emissions generated by them during high-speed driving are lower than those generated by conventional diesel vehicles by as much as 10%. As the only manufacturer of natural gas trucks among the Japanese vehicle manufacturers, we will use the results of this test to further promote natural gas trucks primarily for inter-city transportation. As technical development of natural gas vehicles is a topic for technical development applicable to multiple vehicle models, development costs cannot be derived for development for individual models, but costs like these associated with the environment that have arisen are in the order of 40 billion yen.

### **Comment**

### **Identifier**

Opp3

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

Downstream

### **Opportunity type**

Products and services

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

Development of climate adaptation, resilience and insurance risk solutions

### **Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

### **Company-specific description**

Unlike passenger vehicles, commercial vehicles are used as social infrastructure and need to be repaired as early as possible. Particularly, during recovery from a disaster, trucks are indispensable. Incidence of flood damage due to the effects of global warming is growing, but vehicles that sink in a flood suffer engine and other damage and cannot be used again. As a response to more frequent flood damage, Isuzu Motors has put in place a support system in which sunken vehicles are taken from customers, repaired as much as possible and restored to use as a vehicle. Isuzu has created a repair manual for water damaged vehicles (sunken vehicles) and when a disaster occurs, determines whether or not to implement countermeasures, and if implementation is judged necessary, contacts the affected region, and based on the water damaged vehicle manual, repairs water damaged vehicles. With ESG (environment, social, and governance) investments receiving increasing attention, this activity is valuable in the two aspects: one is environmental value as a climate change countermeasure, and the other is the social aspect of early restoration of social infrastructure.

### **Time horizon**

Medium-term

### **Likelihood**

About as likely as not

### **Magnitude of impact**

Medium

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

Yes, a single figure estimate

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

2000000

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

<Not Applicable>

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

<Not Applicable>

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

In response to flood damage which is expected to become more frequent due to the effects of global warming, it is not an activity that leads directly to sales, but we are providing a new service that responds to global warming in order to also win customer trust. In the service business in Japan only, assuming that around 20 vehicles per year will suffer flood damage, and that half can resume operation after being repaired, and that these vehicles are sent to Isuzu service sites on a regular basis and serviced at 200,000 yen per vehicle, such a scenario could lead to approximately 2 million yen per year in additional after-sales service profit.

### **Cost to realize opportunity**

0

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

Based on the water damaged vehicle manual, implementation is considered and a judgement made by the CSR Promotion Section (the same organization as the Environment Promotion Section) and the Marketing Section . If implementation is decided, the CSR Promotion Section becomes the focus of a response, in which the situation at the disaster affected area is ascertained, contact is made with the local business site, water damaged vehicles are retrieved and contact is made with the customer. In the flooding that occurred in fiscal 2019, restoration efforts were made in accordance with the response manual by collaborating with sales companies close to affected regions, deciding the dispatch of 10 employees, and conducting the investigation of flooded trucks. Direct costs are dependent on the nature of the damage, but as a general principle the response is done within the scope of applicability of insurance and if there are additional costs we may ask the customer to contribute a portion, so that while there is no profit, there is little additional cost. In addition, the dispatch of some employees to disaster-affected areas would produce additional work-hours, but this would not create additional costs.

### **Comment**

## **C3. Business Strategy**

## **C3.1**

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

Yes, and we have developed a low-carbon transition plan

## **C3.1a**

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

Yes, qualitative

## **C3.1b**

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

|  |  |
| --- | --- |
| **Climate-related scenarios and models applied** | **Details** |
| RCP 2.6  RCP 4.5  RCP 6  RCP 8.5  IEA Sustainable development scenario | When considering future scenarios for the automobile industry, economic trends, social trends, and energy trends cannot be separated. The study was based on the socio-economic scenario examined by the IEA and IPCC. At the same time, with regard to the progress of climate change, we referred to each scenario of the IPCC. The Paris Agreement set a target of 2°C or lower in 2050, and a target of 1.5°C as much as possible, and the average number of years of use of commercial vehicles is increasing year by year. Since it was necessary, we conducted a study in 2050. Through scenario analysis, we have reaffirmed that climate change has a major impact on the Isuzu Group's product line. While the development and provision of next-generation powertrains such as EVs for light commercial vehicles that support short-distance and small-volume transportation are progressing, it is predicted that internal combustion engines will continue to play a large role in medium- to large-sized commercial vehicles that support long-distance, large-volume transportation. However, at the same time, a new trend such as electrification of medium to heavy commercial vehicles is also expected. Therefore, it is necessary to develop and market a powertrain that is far more fuel efficient and has no energy loss. Based on the results of scenario analysis, we concluded that it is a very difficult task, but it is necessary to aim for zero CO2 throughout the life cycle in the future. By setting a concrete long-term vision, we were able to show the direction in which to consider various strategies for future decarbonization. Specifically,In addition to EV research and development, Honda has entered into a technical partnership with FCV trucks. Furthermore, we are continuing the biodiesel joint research with Euglena Co., Ltd., and are studying what kind of power train is better as a truck different from passenger cars from the viewpoint of decarbonization energy. |

## **C3.1d**

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

|  |  |  |
| --- | --- | --- |
|  | **Have climate-related risks and opportunities influenced your strategy in this area?** | **Description of influence** |
| Products and services | Yes | The sales pitch we use at Isuzu Motors in our sales activities is “Low Fuel consumption No. 1” and for 19 consecutive years we have been number one in sales in the light truck sector. Over the long term, collaboration in biodiesel development will lead to the rapid development of biodiesel technologies, and this will enable us to not only maximize the use of existing technologies but also distinguish ourselves from the competition. If our global market share were to change by 1%, this would represent a sales volume of around 1000 vehicles per year, and although it is not possible to give a clear financial impact as we sell a wide range of vehicles varying in price from 5 million yen to over 100 million yen for special vehicles, calculated at 7 million yen per unit for one of our bestselling vehicles, this would represent approximately 700 billion yen in increased revenue. The magnitude of this impact is “High” and time horizon is long-term. |
| Supply chain and/or value chain | Yes | In the flooding that occurred in Japan in fiscal 2018, stoppages lasted only several days; countermeasures were implemented including revising production plans and arranging transfers. However, in case production stops for a week or longer, significant revisions of plans will be required. The effect of the 2011 flooding that occurred in Thailand caused operations to shut down for about a month due to delays in supply of components. Because our factories are located on high ground, direct damage from flooding is thought to be limited, but it is conceivable that operating risk could arise in factories from inundation at component suppliers, or from congestion in the traffic network. On a turnover basis, at a maximum, five billion yen per day of damage could occur. The magnitude of this impact is “High” and time horizon is medium-term. |
| Investment in R&D | Yes | Because the cost of development associated with such measures as fuel economy improvement and fuel conversion is a topic for technical development applicable not just to individual vehicle models, but to multiple models, development costs cannot be derived for development for individual models, but costs like these associated with the environment that have arisen are in the order of 40 billion yen. For transportation companies, which are our customers, productivity declines mostly when they cannot use trucks for a long period of time due to a trouble. The connected services PREISM that uses the MIMAMORI system early detects components that are likely to fail and notifies the client, enabling the truck to be stopped in a planned manner and reducing the risk of facing non-operation of the truck for a long period of time. The services, which are installed in all of our trucks as the standard feature to promote the utilization of this technology and improve customer trust, contribute to increasing sales. These services are thought to be highly compatible with electric motor cars, and their further utilization is being considered. Investments in these connected services are positioned as part of investments of up to 350 billion yen that are made over the next three years in the fields with growth potential and the environmental field which includes climate change. The magnitude of this impact is “High” and time horizon is long-term. |
| Operations | Yes | Regulatory information about climate change is one of the most important pieces of information in Isuzu Motors and is particularly important for considering sales and business strategies. There are moves - primarily in the developed nations - to make all types of global environmental regulation more stringent, such as fuel economy and GHG standards, and when selling or exporting and importing new vehicles, sales and export-import are not possible without responding to the wishes of each country, such as in relation to cost, and in such a way as to clear each country’s regulations and standards. The effect in response to these various regulatory and standard setting measures has been our proactive pursuit of development of environmental technologies, which resulted in fiscal 2019 in research and development costs that included those measures, of 98.1 billion yen, a roughly 7 percent increase over the last five years. The magnitude of this impact is “High” and time horizon is long-term. |

## **C3.1e**

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

|  |  |  |
| --- | --- | --- |
|  | **Financial planning elements that have been influenced** | **Description of influence** |
| Row 1 | Revenues  Indirect costs  Capital allocation | Revenues The sales pitch we use at Isuzu Motors in our sales activities is “Low Fuel consumption No. 1” and for 19 consecutive years we have been number one in sales in the light truck sector. Over the long term, collaboration in biodiesel development will lead to the rapid development of biodiesel technologies, and this will enable us to not only maximize the use of existing technologies but also distinguish ourselves from the competition. If our global market share were to change by 1%, this would represent a sales volume of around 1000 vehicles per year, and although it is not possible to give a clear financial impact as we sell a wide range of vehicles varying in price from 5 million yen to over 100 million yen for special vehicles, calculated at 7 million yen per unit for one of our bestselling vehicles, this would represent approximately 700 billion yen in increased revenue. The magnitude of this impact is “High” and time horizon is long-term. Indirect cost Regulatory information about climate change is one of the most important pieces of information in Isuzu Motors and is particularly important for considering sales and business strategies. There are moves - primarily in the developed nations - to make all types of global environmental regulation more stringent, such as fuel economy and GHG standards, and when selling or exporting and importing new vehicles, sales and export-import are not possible without responding to the wishes of each country, such as in relation to cost, and in such a way as to clear each country’s regulations and standards. The effect in response to these various regulatory and standard setting measures has been our proactive pursuit of development of environmental technologies, which resulted in fiscal 2019 in research and development costs that included those measures, of 98.1 billion yen, a roughly 7 percent increase over the last five years. The magnitude of this impact is “High” and time horizon is long-term. Capital allocation Because the cost of development associated with such measures as fuel economy improvement and fuel conversion is a topic for technical development applicable not just to individual vehicle models, but to multiple models, development costs cannot be derived for development for individual models, but costs like these associated with the environment that have arisen are in the order of 40 billion yen. For transportation companies, which are our customers, productivity declines mostly when they cannot use trucks for a long period of time due to a trouble. The connected services PREISM that uses the MIMAMORI system early detects components that are likely to fail and notifies the client, enabling the truck to be stopped in a planned manner and reducing the risk of facing non-operation of the truck for a long period of time. The services, which are installed in all of our trucks as the standard feature to promote the utilization of this technology and improve customer trust, contribute to increasing sales. These services are thought to be highly compatible with electric motor cars, and their further utilization is being considered. Investments in these connected services are positioned as part of investments of up to 350 billion yen that are made over the next three years in the fields with growth potential and the environmental field which includes climate change. The magnitude of this impact is “High” and time horizon is long-term. Acquisitions and divestments We concluded a partnership agreement with Volvo, including an agreement to purchase UD Trucks for 250 billion yen, and we are also currently in discussions with Volvo with a view to continuing our partnership on advanced technological development going forward. In other developments, during the last fiscal year we also entered into a partnership with U.S. company Cummins Inc. to leverage both companies' technical strengths in development of internal-combustion engines. In this way, we are working to reduce rising R&D costs by collaborating with not only companies in the same industry but also with partners from a variety of industries to develop advanced technologies while minimizing the associated investment burden.The magnitude of this impact is “High” and time horizon is long-term. |

## **C3.1f**

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

## **C4. Targets and performance**

## **C4.1**

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

Absolute target

## **C4.1a**

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

### **Target reference number**

Abs 1

### **Year target was set**

2016

### **Target coverage**

Country/region

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

Scope 1+2 (market-based)

### **Base year**

2016

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

232885

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

100

### **Target year**

2023

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

13

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

202609.95

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

202653.33

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

99.8567136965918

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

Underway

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

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

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

Isuzu Motors integrated its environmental initiatives in FY2016 and in 2019 set renewed targets for CO2 emissions. As part of that process, we reviewed SCOPE as a whole, and set the range covered by the targets from existing plants to 100%. At that time, we undertook a review of our approach to setting targets. With plans such as increases to production volumes, commissioning of new factories, and increases to office floor area in place, setting reduction targets is difficult at this point in time, so our goal regarding the extent of increase in BaU levels in our production plans is to not let them increase. We have announced our new mid-term business plan and, in addition to a three-year plan similar to the mid-term business plan, we are conducting activities towards the setting of CO2 reduction from a long-term viewpoint of 10 years or more as a sustainable company as defined in the mid-term business plan.

### **Target reference number**

Abs 2

### **Year target was set**

2018

### **Target coverage**

Country/region

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

Scope 1+2 (location-based)

### **Base year**

2018

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

59411

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

100

### **Target year**

2019

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

1

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

58816.89

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

61101

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

-284.459106899396

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

Underway

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

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

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

We have set a target of 1% reduction year-on-year in Thailand. The target was not achieved because the production volume increased due to the last-minute demand before the model change.

### **Target reference number**

Abs 3

### **Year target was set**

2019

### **Target coverage**

Company-wide

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

Scope 1+2 (market-based) +3 (upstream & downstream)

### **Base year**

2016

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

36941089

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

100

### **Target year**

2050

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

100

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

0

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

36359951

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

1.57314799246985

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

New

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

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

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

We have newly set "ISUZU Environmental Long-Term Vision 2050", and set a new goal of aiming for carbon neutral throughout the life cycle in 2050.

## **C4.2**

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

No other climate-related targets

## **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 | 10 | 120 |
| To be implemented\* | 2 | 16 |
| Implementation commenced\* | 1 | 267.4 |
| Implemented\* | 21 | 11476.6 |
| Not to be implemented | 0 | 0 |

## **C4.3b**

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

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

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

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

1580.2

### **Scope(s)**

Scope 1

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

16967000

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

1323000

### **Payback period**

<1 year

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

1-2 years

### **Comment**

In order to optimize the entire painting process, we spent three years reviewing the process and completed it in fiscal 2018. We revamped the manufacturing process to allow painting to be done flexibly depending on the production volume while maintaining the current production capacity. This contributed to reducing wasteful energy use.

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

|  |  |
| --- | --- |
| Low-carbon energy consumption | Hydropower |

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

9629

### **Scope(s)**

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

0

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

0

### **Payback period**

No payback

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

1-2 years

### **Comment**

Part of the electricity used is changed to renewable energy hydropower

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

|  |  |
| --- | --- |
| Low-carbon energy generation | Solar PV |

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

267.4

### **Scope(s)**

Scope 2 (location-based)

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

5000000

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

12000000

### **Payback period**

1-3 years

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

1-2 years

### **Comment**

Solar panels are newly installed on the premises of the factory and are being consumed by the company.

## **C4.3c**

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

|  |  |
| --- | --- |
| **Method** | **Comment** |
| Internal incentives/recognition programs | The Energy Saving 3R Awards staged in February each year during Energy Saving Month , bring together good examples from sites of energy saving activities. Examples of excellence in energy saving are given a monetary prize and the information is shared company-wide |

## **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**

Product

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

Our products, as Tracks and Buses (Vehicles that meet the FY2015 fuel efficiency standard、exceed standards by 5% or more ）

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

Low-carbon product

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

Other, please specify (Certified by the Japanese Ministry of Land, Infrastructure and Transport)

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

50

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

<Not Applicable>

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

<Not Applicable>

### **Comment**

Vehicles eligible for eco-car tax breaks under the automobile taxation system Although these are Japanese domestic standards, many vehicles exported outside Japan have a similar level of fuel efficiency.

## **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 2015

### **Base year end**

March 31 2016

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

141058

### **Comment**

Japan：124,931 Thailand：17,280 Target Abs 2 (Thailand) base year is 2018 and emissions are 17,280 ton.

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

### **Base year start**

April 1 2015

### **Base year end**

March 31 2016

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

148361

### **Comment**

Japan：107,954 Thailand：42,131 Target Abs 2 (Thailand) base year is 2018 and emissions are 42,131 ton.

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

### **Base year start**

April 1 2015

### **Base year end**

March 31 2016

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

148361

### **Comment**

Japan：107,954 Thailand：42,131 Target Abs 2 (Thailand) base year is 2018 and emissions are 42,131 ton.

## **C5.2**

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

ISO 14064-1

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)**

144559

### **Start date**

<Not Applicable>

### **End date**

<Not Applicable>

### **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**

134730

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

121359

### **Start date**

<Not Applicable>

### **End date**

<Not Applicable>

### **Comment**

## **C6.4**

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

No

## **C6.5**

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

### **Purchased goods and services**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

8808327

### **Emissions calculation methodology**

Calculated by multiplying the purchased amount with CO2 emission factor from the Emissions Unit Database for Calculation of Organizational Greenhouse Gas Emissions, etc. through the Supply Chain Ver. 2.6.

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

0

### **Please explain**

### **Capital goods**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

1625348

### **Emissions calculation methodology**

Calculated by multiplying the purchased amount with CO2 emission factor from the Emissions Unit Database for Calculation of Organizational Greenhouse Gas Emissions, etc. through the Supply Chain Ver. 2.6.

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

0

### **Please explain**

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

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

26441

### **Emissions calculation methodology**

Calculated by multiplying the purchased amount with CO2 emission factor from the Emissions Unit Database for Calculation of Organizational Greenhouse Gas Emissions, etc. through the Supply Chain Ver. 2.6.

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

100

### **Please explain**

### **Upstream transportation and distribution**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

16264

### **Emissions calculation methodology**

Calculated in accordance with domestic ordinances for special shippers involved in transport under the domestic Energy Conservation Act.

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

100

### **Please explain**

### **Waste generated in operations**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

6681

### **Emissions calculation methodology**

Calculated by multiplying the purchased amount with CO2 emission factor from the Emissions Unit Database for Calculation of Organizational Greenhouse Gas Emissions, etc. through the Supply Chain Ver. 2.6.

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

0

### **Please explain**

### **Business travel**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

1064

### **Emissions calculation methodology**

Calculated by multiplying the purchased amount with CO2 emission factor from the Emissions Unit Database for Calculation of Organizational Greenhouse Gas Emissions, etc. through the Supply Chain Ver. 2.6.

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

0

### **Please explain**

### **Employee commuting**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

14658

### **Emissions calculation methodology**

Calculated by multiplying the purchased amount with CO2 emission factor from the Emissions Unit Database for Calculation of Organizational Greenhouse Gas Emissions, etc. through the Supply Chain Ver. 2.6.

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

0

### **Please explain**

### **Upstream leased assets**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

### **Please explain**

Not applicable for Isuzu business activities.

### **Downstream transportation and distribution**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

36523

### **Emissions calculation methodology**

Calculated by multiplying the purchased amount with CO2 emission factor from the Emissions Unit Database for Calculation of Organizational Greenhouse Gas Emissions, etc. through the Supply Chain Ver. 2.6.

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

100

### **Please explain**

### **Processing of sold products**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

326138

### **Emissions calculation methodology**

Calculated by multiplying the purchased amount with CO2 emission factor from the Emissions Unit Database for Calculation of Organizational Greenhouse Gas Emissions, etc. through the Supply Chain Ver. 2.6.

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

0

### **Please explain**

### **Use of sold products**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

25232179

### **Emissions calculation methodology**

We calculated fuel efficiency from the catalog average fuel consumption values and number of vehicles sold. Regarding the lifetime travel distance, we calculated vehicle life from recycling results, and annual driving distances from the transportation statistics of the Ministry of Land, Infrastructure and Transport. It was assumed that light fuel was used.

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

0

### **Please explain**

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

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

410

### **Emissions calculation methodology**

Calculated by multiplying the purchased amount with CO2 emission factor from the Emissions Unit Database for Calculation of Organizational Greenhouse Gas Emissions, etc. through the Supply Chain Ver. 2.6.

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

0

### **Please explain**

### **Downstream leased assets**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

### **Please explain**

Not applicable for Isuzu business activities.

### **Franchises**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

### **Please explain**

Not applicable for Isuzu business activities.

### **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>

### **Please explain**

Not applicable for Isuzu business activities.

### **Other (upstream)**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

### **Please explain**

Not applicable for Isuzu business activities.

### **Other (downstream)**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

### **Please explain**

Not applicable for Isuzu business activities.

## **C6.7**

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

No

## **C6.10**

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

### **Intensity figure**

12.7

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

263755

### **Metric denominator**

unit total revenue

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

20799

### **Scope 2 figure used**

Market-based

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

37

### **Direction of change**

Decreased

### **Reason for change**

The target range was expanded not only in Japan but also globally.

## **C-TS6.15**

### **(C-TS6.15) What are your primary intensity (activity-based) metrics that are appropriate to your emissions from transport activities in Scope 1, 2, and 3?**

### **HDV**

### **Scopes used for calculation of intensities**

Please select

### **Intensity figure**

### **Metric numerator: emissions in metric tons CO2e**

### **Metric denominator: unit**

Please select

### **Metric denominator: unit total**

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

### **Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.**

### **ALL**

### **Scopes used for calculation of intensities**

Please select

### **Intensity figure**

### **Metric numerator: emissions in metric tons CO2e**

### **Metric denominator: unit**

Please select

### **Metric denominator: unit total**

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

### **Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.**

## **C7. Emissions breakdowns**

## **C7.1**

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

No

## **C7.2**

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

|  |  |
| --- | --- |
| **Country/Region** | **Scope 1 emissions (metric tons CO2e)** |
| Japan | 126470 |
| Thailand | 18089 |

## **C7.3**

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

By facility

## **C7.3b**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Facility** | **Scope 1 emissions (metric tons CO2e)** | **Latitude** | **Longitude** |
| Fujisawa Plant | 72746 | 35.398512 | 139.449894 |
| Tochigi Plant | 53484 | 36.306561 | 139.706112 |
| Omori Head Quater / Iuzu hospital | 228 | 35.588109 | 139.73204 |
| Shonan Research Center | 12 | 35.378959 | 139.446036 |
| Samrong | 10460 | 13.6473 | 100.570612 |
| Gateway | 7629 | 13.60613 | 101.329187 |

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

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Gross Scope 1 emissions, metric tons CO2e** | **Net Scope 1 emissions , metric tons CO2e** | **Comment** |
| Cement production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Chemicals production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Coal production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Electric utility activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Metals and mining production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (upstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (midstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (downstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Steel production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Transport OEM activities | 144559 | <Not Applicable> |  |
| Transport services activities | 0 | <Not Applicable> | not covered |

## **C7.5**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Country/Region** | **Scope 2, location-based (metric tons CO2e)** | **Scope 2, market-based (metric tons CO2e)** | **Purchased and consumed electricity, heat, steam or cooling (MWh)** | **Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)** |
| Japan | 91718 | 78347 | 814912 | 20849 |
| Thailand | 43012 | 43012 | 75994 | 200 |

## **C7.6**

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

By facility

## **C7.6b**

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

|  |  |  |
| --- | --- | --- |
| **Facility** | **Scope 2, location-based (metric tons CO2e)** | **Scope 2, market-based (metric tons CO2e)** |
| Fujisawa Plant | 56725 | 49541 |
| Tochigi Plant | 32205 | 26115 |
| Omori Head Quater / Isuzu hospital | 2220 | 2146 |
| Shonan Research Center | 568 | 545 |
| Samrong | 29646 | 29646 |
| Gateway | 13366 | 13366 |

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

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Scope 2, location-based, metric tons CO2e** | **Scope 2, market-based (if applicable), metric tons CO2e** | **Comment** |
| Cement production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Chemicals production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Coal production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Metals and mining production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (upstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (midstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (downstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Steel production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Transport OEM activities | 134730 | 121359 |  |
| Transport services activities | 0 | 0 |  |

## **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**

Heavy Duty Vehicles (HDV)

### **Emissions intensity figure**

0.000042

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

18053564

### **Metric denominator**

t.km

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

425959703899

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

-2.2

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

28945

### **Vehicle lifetime in years**

19.1

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

67586

### **Load factor**

In principle, for trucks, the figures in the Annual Report of Road Transport Statistics of the Ministry of Land, Infrastructure and Transport are used. For GVW of 4 tons or more, a load of 11.4 tons Load factor was set to 11.4 tons.

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

However, the fuel consumption requirement is the average fuel consumption measured in JE05 mode, which is the fuel consumption standard in Japan. GVW 4 tons or more In order to respond to the stricter exhaust gas regulations, the improvement in fuel consumption was limited to the conventional level of modification.

### **Activity**

Heavy Duty Vehicles (HDV)

### **Emissions intensity figure**

0.00017

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

7178615

### **Metric denominator**

t.km

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

42665236750

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

-10.6

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

42408

### **Vehicle lifetime in years**

19.1

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

37624

### **Load factor**

In principle, for trucks, the figures in the Annual Report of Road Transport Statistics of the Ministry of Land, Infrastructure and Transport are used. For GVW of less than 4 tons, load of 1.4 tons Load factor was set to 1.4 tons.

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

GVW 4 tons or less However, the fuel consumption requirement is the average fuel consumption measured in JE05 mode, which is the fuel consumption standard in Japan. We have launched a new engine called 4JZ1, which is both compliant with exhaust gas regulations and improved fuel efficiency.

## **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?**

Increased

## **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 | 9896.4 | Decreased | 4.5 | Last year 9,896.4 tCO2e were reduced by our renewable energy purchase and generation as described in C4.3b , and our total S1 and S2 emissions in the previous year was 220,388 tCO2e, therefore we arrived at (9,896.4/ 220,388)\*100= 4.5% |
| Other emissions reduction activities | 1580.2 | Decreased | 0.7 | Last year 1,580.2 tCO2e were reduced by our emissions reduction projects as described in C4.3b , and our total S1 and S2 emissions in the previous year was 220,388 tCO2e, therefore we arrived at (1,580.2/ 220,388)\*100= 0.7% |
| Divestment | 0 | No change | 0 |  |
| Acquisitions | 0 | No change | 0 |  |
| Mergers | 0 | No change | 0 |  |
| Change in output | 8349 | Decreased | 3.17 | In 2018, there was a rush demand before the emission regulations began, but as a reaction to the decrease in sales volume in 2019 |
| Change in methodology | 1309 | Decreased | 0.7 | The electric power company’s CO2 emission decreased from 0.475kg-CO2/kwh to 0.468kg-CO2/kwh |
| Change in boundary | 61101 | Increased | 27.7 | Entered global production base (61101/ 220,388)\*100= 27.7% |
| Change in physical operating conditions | 0 | No change | 0 |  |
| Unidentified | 0 | No change | 0 |  |
| Other | 0 | No change | 0 |  |

## **C7.9b**

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

Market-based

## **C8. Energy**

## **C8.1**

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

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

## **C8.2**

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

|  |  |
| --- | --- |
|  | **Indicate whether your organization undertook this energy-related activity in the reporting year** |
| Consumption of fuel (excluding feedstocks) | Yes |
| Consumption of purchased or acquired electricity | Yes |
| Consumption of purchased or acquired heat | 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 (renewable and non-renewable) MWh** |
| Consumption of fuel (excluding feedstock) | LHV (lower heating value) | 0 | 729579 | 729579 |
| Consumption of purchased or acquired electricity | <Not Applicable> | 20574 | 242542 | 263116 |
| Consumption of purchased or acquired heat | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of purchased or acquired steam | <Not Applicable> | 0 | 1960 | 1960 |
| Consumption of purchased or acquired cooling | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of self-generated non-fuel renewable energy | <Not Applicable> | 475 | <Not Applicable> | 475 |
| Total energy consumption | <Not Applicable> | 21049 | 974081 | 995130 |

## **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 | No |
| Consumption of fuel for co-generation or tri-generation | Yes |

## **C8.2c**

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

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

Gas Oil

### **Heating value**

LHV (lower heating value)

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

73095

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

0

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

73095

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

0

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

<Not Applicable>

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

0

### **Emission factor**

2.58

### **Unit**

metric tons CO2 per metric ton

### **Emissions factor source**

Ministry of the Environment Law Concerning the Promotion of the Measures to Cope with Global Warming; Law Concerning the Promotion of Measures to Cope with Global Warming

### **Comment**

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

Liquefied Natural Gas (LNG)

### **Heating value**

LHV (lower heating value)

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

256217

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

0

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

0

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

0

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

<Not Applicable>

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

256217

### **Emission factor**

2.7

### **Unit**

metric tons CO2e per metric ton

### **Emissions factor source**

Ministry of the Environment Law Concerning the Promotion of the Measures to Cope with Global Warming; Law Concerning the Promotion of Measures to Cope with Global Warming

### **Comment**

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

Liquefied Petroleum Gas (LPG)

### **Heating value**

LHV (lower heating value)

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

87171

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

0

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

87171

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

0

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

<Not Applicable>

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

0

### **Emission factor**

3

### **Unit**

metric tons CO2e per metric ton

### **Emissions factor source**

Ministry of the Environment Law Concerning the Promotion of the Measures to Cope with Global Warming; Law Concerning the Promotion of Measures to Cope with Global Warming

### **Comment**

Law Concerning the Promotion of the Measures to Cope with Global Warming; Law Concerning the Promotion of Measures to Cope with Global Warming

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

Town Gas

### **Heating value**

LHV (lower heating value)

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

298113

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

0

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

0

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

0

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

<Not Applicable>

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

298113

### **Emission factor**

2.244

### **Unit**

kg CO2e per m3

### **Emissions factor source**

Supplier-provided data

### **Comment**

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

Kerosene

### **Heating value**

LHV (lower heating value)

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

811

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

0

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

811

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

0

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

<Not Applicable>

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

0

### **Emission factor**

811

### **Unit**

kg CO2e per liter

### **Emissions factor source**

Law Concerning the Promotion of the Measures to Cope with Global Warming; Law Concerning the Promotion of Measures to Cope with Global Warming

### **Comment**

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

Fuel Oil Number 1

### **Heating value**

LHV (lower heating value)

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

12540

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

0

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

0

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

0

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

<Not Applicable>

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

0

### **Emission factor**

2.71

### **Unit**

kg CO2e per liter

### **Emissions factor source**

Law Concerning the Promotion of the Measures to Cope with Global Warming; Law Concerning the Promotion of Measures to Cope with Global Warming

### **Comment**

Engine test fuel

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

Motor Gasoline

### **Heating value**

LHV (lower heating value)

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

1632

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

0

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

1632

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

0

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

<Not Applicable>

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

0

### **Emission factor**

2.32

### **Unit**

kg CO2e per liter

### **Emissions factor source**

Law Concerning the Promotion of the Measures to Cope with Global Warming; Law Concerning the Promotion of Measures to Cope with Global Warming

### **Comment**

## **C8.2d**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Total Gross generation (MWh)** | **Generation that is consumed by the organization (MWh)** | **Gross generation from renewable sources (MWh)** | **Generation from renewable sources that is consumed by the organization (MWh)** |
| Electricity | 277633 | 277633 | 475 | 475 |
| Heat | 162725 | 162725 | 0 | 0 |
| Steam | 277158 | 277158 | 0 | 0 |
| Cooling | 0 | 0 | 0 | 0 |

## **C8.2e**

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

### **Sourcing method**

Green electricity products (e.g. green tariffs) from an energy supplier, supported by energy attribute certificates

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

Hydropower

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

Japan

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

20574

### **Comment**

### **Sourcing method**

Other, please specify (Energy was procured either by utilizing our own onsite power generation facilities for consumption, without using the power grid, or by directly sourcing electricity from other companies’ offsite generation facilities using private power lines.)

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

Solar

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

Japan

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

275

### **Comment**

### **Sourcing method**

Other, please specify (Energy was procured either by utilizing our own onsite power generation facilities for consumption, without using the power grid, or by directly sourcing electricity from other companies’ offsite generation facilities using private power lines.)

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

Solar

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

Thailand

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

200

### **Comment**

## **C-TO8.5**

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

### **Activity**

Heavy Duty Vehicles (HDV)

### **Metric figure**

623.72

### **Metric numerator**

tCO2

### **Metric denominator**

Production: Vehicle

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

18053564

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

28945

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

-2.2

### **Please explain**

From the results of fuel consumption measurement based on JE05, the standard for fuel consumption measurement in Japan, we calculated fuel efficiency based on average fuel consumption values and numbers of vehicles sold. Regarding the lifetime travel distance, we calculated vehicle life from recycling results and annual driving distances from the transportation statistics of the Ministry of Land, Infrastructure and Transport. Assuming the use of light fuel, we calculated CO2 emissions for the life cycle of each vehicle. Targeted mainly at trucks with GVW of 4 tons or more

### **Activity**

Heavy Duty Vehicles (HDV)

### **Metric figure**

169.28

### **Metric numerator**

tCO2

### **Metric denominator**

Production: Vehicle

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

7178655

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

42408

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

3.5

### **Please explain**

From the results of fuel consumption measurement based on JE05, the standard for fuel consumption measurement in Japan, we calculated fuel efficiency based on average fuel consumption values and numbers of vehicles sold. Regarding the lifetime travel distance, we calculated vehicle life from recycling results and annual driving distances from the transportation statistics of the Ministry of Land, Infrastructure and Transport. Assuming the use of light fuel, we calculated CO2 emissions for the life cycle of each vehicle. Targeted mainly at trucks with GVW of 4 tons or less

## **C-TS8.5**

### **(C-TS8.5) Provide any efficiency metrics that are appropriate for your organization’s transport products and/or services.**

## **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**

Heavy Duty Vehicles (HDV)

### **Metric**

Sales

### **Technology**

Other, please specify (Vehicle using LPG/CNG)

### **Metric figure**

1000

### **Metric unit**

Other, please specify (Vehicle unit sales)

### **Explanation**

Among OEMs in Japan, only Isuzu Motors manufactures and sells low CO2-emission CNG trucks. At present, we are striving to promote sales utilizing the sales incentive subsidies, etc. from the Ministry of the Environment for the diffusion of next-generation vehicles. From this fiscal year, while receiving Ministry of Environment subsidies, we participated in the first verification tests of LNG trucks in Japan and are promoting the development and marketing of low-CO2 fuel automobiles.

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

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

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

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

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

### **Activity**

Heavy Duty Vehicles (HDV)

### **Technology area**

Electrification

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

Pilot demonstration

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

≤20%

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

5000000000

### **Comment**

After conducting the research phase through to fiscal 2018, in fiscal 2019 we shifted to the verification testing phase, where monitoring was conducted.

## **C10. Verification**

## **C10.1**

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

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

## **C10.1a**

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

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

Annual process

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

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

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

Limited assurance

### **Attach the statement**

[Environmet data Calucuration Report 2018\_E.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/eX6gR842dECikhg1yE3GFQ/EnvironmetdataCalucurationReport2018E.pdf)

[Indipendent Verification Report \_20200327.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/eyj7BuM5p0Sa3sbKxNXq2A/IndipendentVerificationReport20200327.pdf)

### **Page/ section reference**

Indipendent Verification Report \_20200327.pdf 2/2

### **Relevant standard**

ISO14064-3

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

100

## **C10.1b**

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

### **Scope 2 approach**

Scope 2 market-based

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

Annual process

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

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

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

Limited assurance

### **Attach the statement**

[Environmet data Calucuration Report 2018\_E.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/eX6gR842dECikhg1yE3GFQ/EnvironmetdataCalucurationReport2018E.pdf)

[Indipendent Verification Report \_20200327.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/eyj7BuM5p0Sa3sbKxNXq2A/IndipendentVerificationReport20200327.pdf)

### **Page/ section reference**

Indipendent Verification Report \_20200327.pdf 2/2

### **Relevant standard**

ISO14064-3

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

100

## **C10.1c**

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

### **Scope 3 category**

Scope 3 (upstream & downstream)

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

Annual process

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

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

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

Limited assurance

### **Attach the statement**

[Environmet data Calucuration Report 2018\_E.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/eX6gR842dECikhg1yE3GFQ/EnvironmetdataCalucurationReport2018E.pdf)

[Indipendent Verification Report \_20200327.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/eyj7BuM5p0Sa3sbKxNXq2A/IndipendentVerificationReport20200327.pdf)

### **Page/section reference**

Indipendent Verification Report \_20200327.pdf 2/2

### **Relevant standard**

ISO14064-3

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

100

## **C10.2**

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

No, but we are actively considering verifying within the next two years

## **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 you are regulated by.**

### **Japan carbon tax**

### **Period start date**

April 1 2007

### **Period end date**

March 31 2020

### **% of total Scope 1 emissions covered by tax**

88

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

58566812

### **Comment**

In Japan, the rate of a carbon tax per unit quantity (kiloliter or ton) is set in a way that the tax burden of each fossil fuel equals 289 yen per ton of CO2 emissions using the CO2 emission intensity of each fossil fuel.

## **C11.1d**

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

Carbon tax in Japan is levied on all energy deriving from fossil fuels. Since we consider activities for the reduction of energy used to be important, we are promoting planned energy use reduction activities centering on the energy-saving initiatives. (Promotion of energy-saving activity)

Last year 9,896.4 tCO2e were reduced by our renewable energy purchase and generation as described in C4.3b

## **C11.2**

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

No

## **C11.3**

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

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

## **C12. Engagement**

## **C12.1**

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

Yes, our suppliers

Yes, our customers

## **C12.1a**

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

### **Type of engagement**

Engagement & incentivization (changing supplier behavior)

### **Details of engagement**

Run an engagement campaign to educate suppliers about climate change

Offer financial incentives for suppliers who reduce your upstream emissions (Scopes 3)

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

100

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

100

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

100

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

Based on our green procurement guidelines, we receive reports from our suppliers on their GHG emissions and reduction activities. With all suppliers subject to this reporting, the rate of GHG emission reduction plan achievement at our suppliers is 80%, and we are currently working with our suppliers to reach our goal of a 100% achievement rate for GHG emission reduction plans.

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

For example, centering on our suppliers that have not made progress in GHG reductions, we are pursuing environmental activities in collaboration with our suppliers, such as holding energy conservation seminars in 2018 for our suppliers as a boost to their energy-saving activities. These seminars were intended for suppliers with a score of lower than 30% with respect to the items of energy conservation in the supplier questionnaire, which were based on our green procurement guidelines. Every year, we share as feedback the results of questionnaire surveys confirming the status of activities, etc., and, while striving to grasp suppliers’ needs, provide direct guidance when necessary. The number of companies responding to the questionnaire surveys is also tending to increase, reflecting increasing understanding of Isuzu’s activities. The questionnaire response rate increased to around 83% last year from around 60% in 2017. We are conducting activities to increase the response rate to 100% eventually.

### **Comment**

## **C12.1b**

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

### **Type of engagement**

Education/information sharing

### **Details of engagement**

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

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

30

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

20

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

<Not Applicable>

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

In commercial vehicles, whether the product is fuel-efficient or not is one of the major factors in making a purchasing decision. Therefore, we regard the benefit of “being fuel-efficient” as a key pillar of our sales strategy. Based on its Scope 3 emissions results, Isuzu Motors’ percentage of customers’ use phase emissions in Category 11 is 69.9%. Since this is the largest source of our emissions, we have been promoting these activities for some time. In promoting these activities, we are not only pursuing climate change countermeasures, but also hope to encourage our customers to actively promote climate change countermeasures by making them aware that these activities lead to the reduction of their costs. At the same time, we aim to strengthen our relationship of trust with customers as a company that provides them with useful information. In order to promote eco-driving of trucks, etc., Isuzu Motors holds fuel-saving training classes for transportation operators. At these fuel-saving training classes, we teach transportation operators in Japan and overseas the main points of fuel saving when driving trucks using teaching materials specially prepared by the company. Through these training classes, we aim promote activities that lead to climate change countermeasures, not only from the hardware viewpoint but also from the perspective of services. These programs are implemented together with the Foundation for Promoting Personal Mobility and Ecological Transportation (“Eco-Mo Foundation”), an external foundation of the Ministry of Land, Infrastructure and Transport. These activities also have a significant impact on Category 11 and thus lead to the improvement of Category 11, the category that accounts for the highest proportion of emissions in Scope 3. However, since these are only improvements in services, although they undoubtedly have a beneficial effect, they do not lead to any numerical improvement in Scope 3, since the extent of their effect cannot be calculated.

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

Even if the most advanced technologies are introduced, fuel consumption is greatly influenced by the way how the drivers operate automobiles. After drivers attend the fuel-saving training class, their fuel consumption improves on average by 30 to 40 percent. By having them attend these classes, we make them aware that they are not only implementing climate change countermeasures but also reducing their everyday costs, and they have been actively promoting eco-driving activities even more than before. At the same time, through the continuous repetition of these programs, we believe that we can gain the trust of our customers, leading to further increases in sales. We offer these programs as part of services to customers and do not set specific numerical targets for them, but we see them as important events to achieve our sales goals. The number of participating companies significantly decreased in 2018 because the venue was affected by the 2018 Hokkaido Eastern Iburi Earthquake and the event was cancelled. Restoration activities are ongoing in fiscal 2019.

## **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 (JAMA)

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

Consistent

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

The Japan Automobile Manufacturers Association (JAMA) was established for member manufacturers that produce vehicles in Japan, including passenger vehicles, trucks, buses and motorbikes and comprises 14 vehicle manufacturing companies. The JAMA is untiring in reducing the burden of the car on the environment and with a view to achieving a society in which humans and nature can better co-exist and starting with preventing global warming, is pursuing initiatives to address environmental issues across the product lifecycle from development stage to production, use and recycling. The JAMA is engaged in such vehicle manufacturer initiatives as fuel economy improvement and development of the next generation vehicle to reduce C02 from the transport sector, considers important comprehensive initiatives such as transport flow smoothing through elimination of traffic congestion, practical application of eco-driving by vehicle users and fuel diversification, and is also engaged in a wide range of research and submission activities

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

The JAMA has a number of conferencing entities according to area, headed up by the Board of Directors and attended by our Managing Executive Officer . For the environment, the Environment Committee is the primary committee that considers various environmental issues, and countermeasures to global warming are also progressed by the Environment Committee. The Isuzu Motors director responsible for external affairs represents commercial vehicle manufacturers as the Deputy Chair of the Environment Committee. In addition, details of global warming countermeasures are considered in the Climate Change sub-committee , which is a sub-committee of the Environment Committee. The Manager of the Environmental Planing Group from the Corporate Communications Department, which is the entity responsible for external affairs, participates in that committee, with responsibility for direction and coordination for the entire company.

## **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?**

At Isuzu Motors, the director responsible for external affairs represents commercial vehicle manufacturers as the Deputy Chair of the Environment Committee of the JAMA. Topics that are considered significant to the external affairs of the company are debated at meetings of the Group Companies Technical and External Affairs Meeting convened monthly and attended by the Director responsible for external affairs, to coordinate linkages with whole-of-company activities. Further, details of global warming countermeasures are considered in the Climate Change sub-Comittee, a sub-committee of the environment Committee. The Manager of the Environmental Planing Group from the Corporate Communications Department, which is the entity responsible for external affairs, participates in that committee to coordinate with Isuzu Motors strategy

## **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 voluntary sustainability report

### **Status**

Underway – previous year attached

### **Attach the document**

[csr\_report\_new.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/FTCaUQKvQUqw2Oy8G5JP6Q/csrreportnew.pdf)

### **Page/Section reference**

Governance:P18,P19 Strategy:P18,P22,P23 Risks & opportunities:P18 Emissions figures:P30-P31 Emission targets:P30-P31 Other metrics: GHG emission, Logistics CO2 emission, Energy Consumption:P20-P29

### **Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

Other, please specify (GHG emission, Logistics CO2 emission, Energy Consumption)

### **Comment**

### **Publication**

In mainstream reports

### **Status**

Complete

### **Attach the document**

[h32.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/WRVDZuhtYk-wGTmX63S2vQ/h32.pdf)

### **Page/Section reference**

Business strategy P12: CASE(Connected,Autonomous,Shared, Electric) strategy Business risks and opportunities P15: Increased R&D expenses for CASE strategy, Reputation risk for environmental activities due to increased ESG investment. P18: Enforcement of environmental regulations in other countries, risk of operation suspension due to disaster such as large-scale flood due to climate change Governance system P43: Status of development of risk management system

### **Content elements**

Governance

Strategy

Risks & opportunities

### **Comment**

Documents submitted under the Financial Instruments and Exchange Act that are submitted to the Tokyo Stock Exchange and are written in Japanese only. P18 English translation We are subject to various regulations in each country in which we do business. In particular, exhaust gas regulations tend to be tightened as environmental awareness increases. The amount of investment to comply with this will be large, and it may not be possible to achieve sales that match these investments in the future. We collect information on trends in political parties in each country, and make investments and develop new technologies and products in preparation for changes in laws and regulations. In the unlikely event that there are unexpected revisions or abolitions of regulations, etc. or changes in operations, they could have a significant impact on our business performance and financial position.

## **C15. Signoff**

## **C-FI**

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

## **C15.1**

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

|  |  |  |
| --- | --- | --- |
|  | **Job title** | **Corresponding job category** |
| Row 1 | Director of the Board and Managing Executive Officer Shinichi Takahashi | Director on board |