# **Isuzu Motors Limited - Climate Change 2018**

## **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** |
| Row 1 | April 1 2017 | March 31 2018 | No | <Not Applicable> |
| Row 2 | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Row 3 | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Row 4 | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |

## **C0.3**

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

Japan

## **C0.4**

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

JPY

## **C0.5**

### **(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.**

Financial control

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

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

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) of the individual(s) on the board with responsibility for climate-related issues.**

|  |  |
| --- | --- |
| **Position of individual(s)** | **Please explain** |
| Director on board | The Senior Executive Officers, 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. |

## **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** | **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  Overseeing major capital expenditures, acquisitions and divestitures  Monitoring and overseeing progress against goals and targets for addressing climate-related issues | 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. However, this was not submitted to the Board of Directors this year. In addition to the company’s latest environmental performance, the report included an outline of the progress of formulation of our long-term environmental vision with 2050 as the target year, which is currently under consideration. It also reported on the contents of the Isuzu Charter on the Global Environment, which details of the company’s various environmental activities centering around climate change countermeasures. In the reporting year, the Board of Directors discussed and made resolutions concerning strategies and investment for the development of heavy-duty products, such as the development of Powertrain products aimed at decarbonization, which is important for the company but also involves risks. |

## **C1.2**

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

|  |  |  |
| --- | --- | --- |
| **Name of the position(s) and/or committee(s)** | **Responsibility** | **Frequency of reporting to the board on climate-related issues** |
| Safety, Health, Environment and Quality committee | Both assessing and managing climate-related risks and opportunities | 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.**

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

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 at least once a year. These climate change countermeasures are handled throughout the company by the Global Environment Committee. The head of the Global Environment Committee, who is a Senior Executive Officer of the company, promotes these initiatives as the person responsible for climate change countermeasures.

## **C1.3**

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

Yes

## **C1.3a**

### **(C1.3a) Provide further details on the incentives provided for the management of climate-related issues.**

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

All employees

### **Types of incentives**

Monetary reward

### **Activity incentivized**

Emissions reduction project

### **Comment**

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

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

Environment/Sustainability manager

### **Types of incentives**

Monetary reward

### **Activity incentivized**

Emissions reduction target

### **Comment**

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.

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

Board/Executive board

### **Types of incentives**

Monetary reward

### **Activity incentivized**

Emissions reduction project

### **Comment**

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.

## **C2. Risks and opportunities**

## **C2.1**

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | **From (years)** | **To (years)** | **Comment** |
| Short-term | 0 | 1 |  |
| Medium-term | 1 | 3 |  |
| Long-term | 3 | 30 |  |

## **C2.2**

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

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

## **C2.2a**

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Frequency of monitoring** | **How far into the future are risks considered?** | **Comment** |
| Row 1 | Six-monthly or more frequently | >6 years |  |

## **C2.2b**

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

Company level

Significant environmental risks and opportunities for the Isuzu Group over six years, including climate change, are evaluated by the Global Environment Committee, chaired by the 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.

Asset level

There are risk management rules based on ISO14001 in each factory and each sector identifies risk including climate change, in accordance with the rules, which are reported to the environmental manager at each site. Site managers collate the details of risks in accordance with the rules and evaluate the risks at the site, which information is then approved by the responsible person at each site (factory manager level). The approved information is reported to the Global Environment Committee, which is the secretariat for the entire company.

For the definitions of risk terminologies, in addition to ISO14001, we refer to guidelines such as CDP/TCFD.

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. The definition of “substantive financial impact” in the Isuzu Group is determined in the deliberations/report to the Management Meeting and is generally set at the level of one billion yen as a target.

## **C2.2c**

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

|  |  |  |
| --- | --- | --- |
|  | **Relevance & inclusion** | **Please explain** |
| Current regulation | Relevant, always included | 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. |
| Emerging regulation | Relevant, always included | In Japan, a new fuel consumption standard is to be set regarding heavy-duty trucks, etc. with 2025 as the target year. Regarding the new fuel consumption standard, the Senior Executive Officer responsible for technology public relations in the research and development sector is investigating the various regulation trends in Japan and overseas at the Technology Public Relations Meeting, which he chairs, and disseminating and sharing throughout the company. Specifically, the regulations are reviewed at the Product Development Meeting, the highest decision-making meeting which is chaired by the director responsible for research and development in the product development sector, and strategically promoted based on a plan for their introduction in coordination with the company’s technology strategy. |
| Technology | Relevant, always included | In Japan, a new fuel consumption standard is to be set regarding heavy-duty trucks, etc. with 2025 as the target year. Product technologies related to fuel, etc. are evaluated and examined in the technology strategy section of the research and development sector and then reviewed at the Product Development Meeting, the highest decision-making meeting which is chaired by the director responsible for research and development in the product development sector. We are currently promoting the development of low-carbon and decarbonization technologies such as xEV and higher-efficiency internal combustion engines. |
| Legal | Relevant, always included | In Japan, a new fuel consumption standard is to be set regarding heavy-duty trucks, etc. with 2025 as the target year. Regarding fuel consumption, since technological public relations activities will become important, the Senior Executive Officer responsible for technology public relations in the research and development sector is investigating the various regulation trends in Japan and overseas at the Technology Public Relations Meeting, which he chairs, and disseminating and sharing them throughout the company. |
| Market | Relevant, sometimes included | As far as the product market is concerned, there are sales representatives in charge of each country in the sales sector who, in their respective sections, conduct surveys of market trends by collecting data from dealers in each country. The results of these surveys are shared once every quarter at the Product Development Meeting, the highest decision-making body in the product development sector, and utilized in product development. 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. |
| 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 3 million yen. |
| Upstream | Relevant, always included | In urgent emergency situations such as flooding, the risk to supply chains is particularly 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. |
| Downstream | Not relevant, included | As far as the product market is concerned, there are sales representatives in charge of each country in the sales sector who, in their respective sections, conduct surveys of market trends by collecting data from dealers in each country. The results of these surveys are shared once every quarter at the Product Development Meeting, the highest decision-making body in the product development sector, and utilized in product development. 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. |

## **C2.2d**

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

Isuzu Motors is promoting environmental management across the entire company in accordance with ISO14001 activities constitute processes for identifying environmental risks and opportunities. In addition to identification of risk and opportunity, the process of weighting has been formalized and documented in internal rules which guide operation. Specifically, risks and opportunities identified from internal responses, trends among competitors, the fiscal environment, trends in domestic and international regulation, trends in the occurrence of natural disasters and changes in customer desires are subject to environmental weighting, primarily in light of current or future trends in regulation, and corresponding priorities are assigned.

The following are examples of application of the management process.

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.

Physical opportunities

Isuzu Motors is the only domestic vehicle manufacturer and seller of natural gas 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.

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.

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 Senior 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.

Transition opportunities

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.

In 2016 we launched a Giga model that exceeded fiscal 2016 standards by more than five percent and sales began in Japan of the first large CNG vehicle, Giga CNG We anticipate a Ministry of the Environment subsidy for Giga CNG and anticipate further expansion of our market share.

## **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?**

Customer

### **Risk type**

Transition risk

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

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

### **Type of financial impact driver**

Technology: Research and development (R&D) expenditures in new and alternative technologies

### **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 2014 in research and development costs that included those measures, of 96.8 billion yen, a roughly 30 percent increase over the last five years. Furthermore, the company is considering investing about 350 billion yen in advanced technology fields, including the environment. The importance of technical development is expected to increase going forward, and in the five to ten-year medium to long term, it is likely to have a negative effect on our financial situation.

### **Time horizon**

Long-term

### **Likelihood**

Likely

### **Magnitude of impact**

Medium-high

### **Potential financial impact**

1000000000

### **Explanation of financial impact**

More stringent regulation of environmental and other issues has caused the cost of research and development to exceed 100 billion yen, 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.

### **Management method**

The Senior 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. In 2017, the company greatly improved fuel consumption in our Giga and Forward heavy-duty trucks through improvements not only to the engines but also by introducing “Smoother Gx” transmission, which enables smoother starts and gear changes. 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.

### **Cost of management**

350000

### **Comment**

Unit of figure in potential financial impact is million yen. 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.

### **Identifier**

Risk 2

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

Supply chain

### **Risk type**

Physical risk

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

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

### **Type of financial impact driver**

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

### **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.

### **Time horizon**

Long-term

### **Likelihood**

About as likely as not

### **Magnitude of impact**

Medium-low

### **Potential financial impact**

5000000000

### **Explanation of financial impact**

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.

### **Management method**

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 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.

### **Cost of management**

0

### **Comment**

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.

### **Identifier**

Risk 3

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

Customer

### **Risk type**

Transition risk

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

Market: Changing customer behavior

### **Type of financial impact driver**

Market: Reduced demand for goods and/or services due to shift in consumer preferences

### **Company- specific description**

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**

Current

### **Likelihood**

Virtually certain

### **Magnitude of impact**

Medium-low

### **Potential financial impact**

10000000000

### **Explanation of financial impact**

The sales pitch we use at Isuzu Motors in our sales activities is “Low Fuel consumption No. 1” and for 17 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.

### **Management method**

The Senior Executive Officer from the Engineering Division and all management levels from Director and above responsible for the Engineering Division participate in the Product Research and Development 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. In 2017, the company greatly improved fuel consumption in our Giga and Forward heavy-duty trucks through improvements not only to the engines but also by introducing “Smoother Gx” transmission, which enables smoother starts and gear changes. 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.

### **Cost of management**

350000

### **Comment**

Unit of figure in potential financial impact is million yen. 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.

## **C2.4**

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

Yes

## **C2.4a**

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

### **Identifier**

Opp1

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

Customer

### **Opportunity type**

Products and services

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

Development and/or expansion of low emission goods and services

### **Type of financial impact driver**

Increased revenue through demand for lower emissions 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 17 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).

### **Time horizon**

Long-term

### **Likelihood**

Likely

### **Magnitude of impact**

High

### **Potential financial impact**

10000000000

### **Explanation of financial impact**

The sales pitch we use at Isuzu Motors in our sales activities is “Low Fuel consumption No. 1” and for 17 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 100 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.

### **Strategy to realize opportunity**

The Senior Executive Officer from the Engineering Division and all management levels from Director and above responsible for the Engineering Division participate in the Product Research and Development 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. In 2017, the company greatly improved fuel consumption in our Giga and Forward heavy-duty trucks through improvements not only to the engines but also by introducing “Smoother Gx” transmission, which enables smoother starts and gear changes. 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. 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.

### **Cost to realize opportunity**

350000

### **Comment**

Unit of figure in potential financial impact is million yen. 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.

### **Identifier**

Opp2

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

Supply Chain

### **Opportunity type**

Products and services

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

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

### **Type of financial impact driver**

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

### **Company- specific description**

Isuzu Motors is the only domestic vehicle manufacturer and seller of natural gas 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. With the provision of subsidies by the Ministry of the Environment for CNG and LNG trucks, we commenced verification tests in 2017 and in 2018 we commenced preparations to conduct drive tests.

### **Time horizon**

Medium-term

### **Likelihood**

Likely

### **Magnitude of impact**

Medium

### **Potential financial impact**

5000000000

### **Explanation of financial impact**

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.

### **Strategy to realize opportunity**

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. We anticipate a Ministry of the Environment subsidy for Giga CNG and anticipate further expansion of our market share.In addition to compressed natural gas (CNG), in 2017 we began development of LNG trucks with a grant from the Ministry of the Environment. We are currently working to develop, disseminate and promote the use of trucks that use natural gas.

### **Cost to realize opportunity**

350000

### **Comment**

Unit of figure in potential financial impact is million yen. 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 350 billion yen

### **Identifier**

Opp3

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

Customer

### **Opportunity type**

Products and services

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

Development of climate adaptation and insurance risk solutions

### **Type of financial impact driver**

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

### **Company- specific description**

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.

### **Time horizon**

Medium-term

### **Likelihood**

About as likely as not

### **Magnitude of impact**

Medium

### **Potential financial impact**

100000000

### **Explanation of financial impact**

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. The trust gained through these efforts is expected to result in replacement demand of around 10 trucks per year in the unfortunate event that trucks cannot be repaired easily in the aftermath of a disaster, with a projected impact of approximately JPY 100 million.

### **Strategy to realize opportunity**

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.

### **Cost to realize opportunity**

0

### **Comment**

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.

## **C2.5**

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

|  |  |  |
| --- | --- | --- |
|  | **Impact** | **Description** |
| Products and services | Impacted | The sales pitch we use at Isuzu Motors in our sales activities is “Low Fuel consumption No. 1” and for 17 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. |
| Supply chain and/or value chain | Impacted for some suppliers, facilities, or product lines | In view of the increasing disaster risks such as flooding due to climate change, we have considered these matters and requested our suppliers to promote climate change countermeasures and water damage risk measures in view of the possibility of flooding, etc. as well. In automobile production, if the supply of just one part among tens of thousands of parts is delayed, production cannot be completed. If production is suspended for one day due to a problem with parts supply, the loss is expected to be up to about 3 billion yen. |
| Adaptation and mitigation activities | Impacted | Disaster risks such as flooding due to climate change is increasing. Since commercial vehicles are essential infrastructure that must be recovered quickly in the event of a disaster, we are building systems to enable the rapid recovery of trucks, etc. after a disaster occurs and are preparing a detailed disaster response manual so that they can be put to use. The direct impact on costs is expected to be about 5 million yen in personnel costs, but it is also expected to lead to an increase in total sales of about 100 million yen through the generation of subsequent business. |
| Investment in R&D | Impacted | The importance of environment-related R&D, such as EV and self-driving vehicles, is increasing. In view of this importance, Isuzu Motors plans to invest about 350 billion yen in research and development over the next three years. |
| Operations | Impacted for some suppliers, facilities, or product lines | 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 automobile production, if the supply of just one part among tens of thousands of parts is delayed, production cannot be completed. If production is suspended for one day due to a problem with parts supply, the loss is expected to be up to about 3 billion yen. |
| Other, please specify | Not impacted |  |

## **C2.6**

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

|  |  |  |
| --- | --- | --- |
|  | **Relevance** | **Description** |
| Revenues | Impacted | The sales pitch we use at Isuzu Motors in our sales activities is “Low Fuel consumption No. 1” and for 17 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. It is possible that these measures may lead to a reduction of sales of around 4 to 20 billion yen. |
| Operating costs | Not yet impacted | At present we face the impact of an increase of about 4 million yen in energy costs every year, but the impact is not great on our business as a whole. However, if there is an increase in carbon tax, such as the carbon pricing currently being considered by the government, there could be an impact from an increase in energy costs, etc., but in general we consider that this impact is not likely to be great. |
| Capital expenditures / capital allocation | Not yet impacted | The importance of environment-related R&D, such as EV and self-driving vehicles, is increasing. In view of this importance, Isuzu Motors plans to invest about 350 billion yen in research and development over the next three years. |
| Acquisitions and divestments | Not yet impacted | 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. There is a concern that the company’s aggregate market value may decrease by about 40 billion yen (calculated based on the fact that the aggregate market value increased by about 40 billion yen when the company was selected for the ESG investment index). |
| Access to capital | Impacted | Nowadays opportunities for investment in ESG are increasing and these can lead to an increase in a company’s market value. For example, last year Isuzu Motors was selected for the MSCI Japan ESG Leaders Index authorized by the Government Pension Investment Fund (GPIF). The day after this result was announced, Isuzu’s share price increased by about 50 yen (equivalent to about 40 billion yen in aggregate market value). |
| Assets | Not yet impacted | Isuzu Motors’ development and production activities have centered around internal combustion engines. According to current assessments, we do not consider that internal combustion engines will suddenly decrease, but they may become a stranded asset depending on future trends, so we will keep a close eye on these trends. Since it is possible that costs and investment may increase with the promotion of development such as xEV in the future, the company plans to invest up to 350 billion yen over the next three years. |
| Liabilities | Not yet impacted | 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. There is a concern that the company’s aggregate market value may decrease by about 40 billion yen (calculated based on the fact that the aggregate market value increased by about 40 billion yen when the company was selected for the ESG investment index). |
| Other | Not impacted |  |

## **C3. Business Strategy**

## **C3.1**

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

Yes

## **C3.1a**

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

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

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

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

In development, we plan to complete it within the next 2 years

## **C3.1c**

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

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

The Global Environment Committee chaired by the Senior Executive Officer in charge of the Engineering Division of the Operation Headquarter, evaluates important environmental issues, including climate change, in the Isuzu Group. 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.

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

A specific example of something that affected management strategy was the identification of poor external environmental assessments, including from CDP, and the associated direction to respond proactively to CDP and other external assessments, which caused internal organizational reform to enhance the positioning of environmental activities with the relocation of promotion of the environment from the traditional CSR Promotion Department, to promotion of environmental activities in the new Corporate Communications Department, which was set up to enhance external announcements.

In fiscal 2017, the 3-year mid-term business plan from 2018, which was discussed and approved by the Board of Directors, was determined. This plan provides for the strengthening of sustainability activities based on SDGs. The company’s climate change countermeasures are positioned as “resolving global environmental issues and maintaining economic development” as an important pillar of the mid-term business plan. As far as the concrete objectives being pursued up to the end of fiscal 2018 will be continued and the objectives based on the mid-term business plan will be determined next fiscal year. As a new business opportunity, we are also considering promoting business that contribute to decarbonization.

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

The revenue of Isuzu Motors is under pressure from the cost of technological development due to stricter domestic and international regulation of fuel economy and exhaust gases, and is considered the single greatest risk to the business of climate change. As a response to various regulatory and standards measures, we are proactively pursuing the development of environmental technology.

In fiscal 2017, the 3-year mid-term business plan from 2018, which was discussed and approved by the Board of Directors, was determined. This plan provides for the strengthening of sustainability activities based on SDGs. The company’s climate change countermeasures are positioned as “resolving global environmental issues and maintaining economic development” as an important pillar of the mid-term business plan. The company has decided to invest up to 350 billion yen in fields that contribute to decarbonization, etc. during the period of the mid-term business plan.

## **C3.1g**

### **(C3.1g) Why does your organization not use climate-related scenario analysis to inform your business strategy?**

Isuzu Motors has included climate change countermeasures as an important pillar of the mid-term business plan. We have already begun activities aimed at formulating a business plan based on scenario analysis in accordance with the mid-term plan. We have commenced activities aimed at formulating scenarios across all sectors of the company and intend to reflect climate-related scenarios in future business plans. Specifically, we plan to draft the first scenario through a project across all sectors of the company in 2018 and to reflect these contents the drafting of business plans in each sector in 2019.

## **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

### **Scope**

Scope 1+2 (location-based)

### **% emissions in Scope**

100

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

3

### **Base year**

2015

### **Start year**

2015

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

232885

### **Target year**

2018

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

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

### **% achieved (emissions)**

100

### **Target status**

Underway

### **Please explain**

Isuzu Motors integrated its environmental initiatives in FY2016 and 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.

## **C4.2**

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

## **C4.3**

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

Yes

## **C4.3a**

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

|  |  |  |
| --- | --- | --- |
|  | **Number of projects** | **Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked \*)** |
| Under investigation | 1 | 17 |
| To be implemented\* | 2 | 19 |
| Implementation commenced\* | 6 | 300 |
| Implemented\* | 15 | 1437 |
| Not to be implemented | 0 | 0 |

## **C4.3b**

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

### **Activity type**

Process emissions reductions

### **Description of activity**

Changes in operations

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

771

### **Scope**

Scope 1

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

### **Annual monetary savings (unit currency – as specified in CC0.4)**

22321800

### **Investment required (unit currency – as specified in CC0.4)**

23861000

### **Payback period**

1-3 years

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

1-2 years

### **Comment**

CO2 emissions were reduced by about 1500 tons compared to BaU through productivity improvement and energy-saving activities resulting from the improvement of the vehicle painting process and revision of production methods.

### **Activity type**

Process emissions reductions

### **Description of activity**

New equipment

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

666

### **Scope**

Scope 1

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

### **Annual monetary savings (unit currency – as specified in CC0.4)**

15647100

### **Investment required (unit currency – as specified in CC0.4)**

6892000

### **Payback period**

<1 year

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

<1 year

### **Comment**

### **Activity type**

Energy efficiency: Building services

### **Description of activity**

Lighting

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

2

### **Scope**

Scope 1

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

### **Annual monetary savings (unit currency – as specified in CC0.4)**

30000

### **Investment required (unit currency – as specified in CC0.4)**

3935000

### **Payback period**

>25 years

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

3-5 years

### **Comment**

## **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）

### **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

*Proportion of vehicles meeting the Top Runner standard, the latest fuel standard in Japan (2015)*

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

98

### **Comment**

## **C5. Emissions methodology**

## **C5.1**

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

### **Scope 1**

### **Base year start**

April 1 2015

### **Base year end**

March 31 2016

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

124931

### **Comment**

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

### **Base year start**

April 1 2015

### **Base year end**

March 31 2016

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

107954

### **Comment**

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

### **Base year start**

April 1 2015

### **Base year end**

March 31 2016

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

107954

### **Comment**

## **C5.2**

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

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?**

### **Row 1**

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

132181

### **End-year of reporting period**

<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?**

### **Row 1**

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

91586

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

85928

### **End-year of reporting period**

<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 Scope 3 emissions, disclosing and explaining any exclusions.**

### **Purchased goods and services**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

4814071

### **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. 2.5.

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

87

### **Explanation**

### **Capital goods**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

115216

### **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. 2.5.

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

0

### **Explanation**

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

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

32900

### **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. 2.5.

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

0

### **Explanation**

### **Upstream transportation and distribution**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

17242

### **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**

0

### **Explanation**

### **Waste generated in operations**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

6125

### **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. 2.5.

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

0

### **Explanation**

### **Business travel**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

1056

### **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. 2.5.

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

0

### **Explanation**

### **Employee commuting**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

14482

### **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. 2.5.

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

0

### **Explanation**

### **Upstream leased assets**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

0

### **Emissions calculation methodology**

Not applicable for Isuzu business activities.

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

0

### **Explanation**

### **Downstream transportation and distribution**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

37768

### **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**

0

### **Explanation**

### **Processing of sold products**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

600776

### **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. 2.5.

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

0

### **Explanation**

### **Use of sold products**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

27393155

### **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

### **Explanation**

Since last fiscal year, the calculation method has been changed. If last year’s results were calculated using this year’s method, the figure would be 30,994,552 tons of CO2.

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

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

384

### **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. 2.5.

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

0

### **Explanation**

### **Downstream leased assets**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

0

### **Emissions calculation methodology**

Not applicable for Isuzu business activities.

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

0

### **Explanation**

### **Franchises**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

0

### **Emissions calculation methodology**

Not applicable for Isuzu business activities.

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

0

### **Explanation**

### **Investments**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

0

### **Emissions calculation methodology**

Not applicable for Isuzu business activities.

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

0

### **Explanation**

### **Other (upstream)**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

0

### **Emissions calculation methodology**

Not applicable for Isuzu business activities.

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

0

### **Explanation**

### **Other (downstream)**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

0

### **Emissions calculation methodology**

Not applicable for Isuzu business activities.

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

0

### **Explanation**

## **C6.7**

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

No

## **C6.10**

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

### **Intensity figure**

20.2

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

218109

### **Metric denominator**

Other, please specify (売上高（億円）)

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

10814

### **Scope 2 figure used**

Market-based

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

9.1

### **Direction of change**

Decreased

### **Reason for change**

Total sales increased compared with the previous year due to reduction of the amount of CO2 emissions. While the amount of energy used increased slightly in proportion to sales, CO2 emissions were reduced by about 1500 tons compared to BaU through productivity improvement and energy-saving activities resulting from the improvement of the vehicle painting process and revision of production methods. Due to the significant improvement of the CO2 emission rate from electric power, overall CO2 emissions were reduced.

## **C7. Emissions breakdowns**

## **C7.1**

### **(C7.1) Does your organization have greenhouse gas emissions other than carbon dioxide?**

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 | 132181 |

## **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 | 78251 | 35.398512 | 139.449894 |
| Tochigi Plant | 53059 | 36.306561 | 139.706112 |
| Omori Head Quater / Iuzu hospital | 858 | 35.588109 | 139.73204 |
| Shonan Research Center | 13 | 35.378959 | 139.446036 |

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

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Gross Scope 1 emissions, metric tons CO2e** | **Net Scope 1 emissions , metric tons CO2e** | **Comment** |
| Cement production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Chemicals production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Coal production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Electric utility generation activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Metals and mining production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (upstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (downstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Steel production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Transport OEM activities | 132181 | <Not Applicable> |  |
| Transport services activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |

## **C7.5**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Country/Region** | **Scope 2, location-based (metric tons CO2e)** | **Scope 2, market-based (metric tons CO2e)** | **Purchased and consumed electricity, heat, steam or cooling (MWh)** | **Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)** |
| Japan | 91586 | 85928 | 475972 | 0 |

## **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 emissions (metric tons CO2e)** | **Scope 2, market-based emissions (metric tons CO2e)** |
| Fujisawa Plant | 59557 | 55877 |
| Tochigi Plant | 29288 | 27478 |
| Omori Head Quater / Isuzu hospital | 2110 | 1979 |
| Shonan Research Center | 631 | 594 |

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

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Scope 2, location-based, metric tons CO2e** | **Scope 2, market-based (if applicable), metric tons CO2e** | **Comment** |
| Cement production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Chemicals production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Coal production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Metals and mining production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (upstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (downstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Steel production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Transport OEM activities | 91586 | 85928 |  |
| Transport services activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |

## **C-TO7.8**

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

### **Activity**

Heavy Duty Vehicles (HDV)

### **Emissions intensity figure**

0.000002

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

19494286

### **Metric denominator**

t.km

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

999999999999

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

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

30571

### **Vehicle lifetime in years**

19.9

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

1325041

### **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 11.46 tons For GVW of less than 4 tons, 1.4 tons However, the fuel consumption requirement is the average fuel consumption measured in JE05 mode, which is the fuel consumption standard in Japan.

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

GVW 4 tons or more We tried to enter the response on the 5th column but there were not enough digit spaces, so we have entered it here: 9,237,972,300,442

### **Activity**

Heavy Duty Vehicles (HDV)

### **Emissions intensity figure**

0.000009

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

7898869

### **Metric denominator**

t.km

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

837204539584

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

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

41691

### **Vehicle lifetime in years**

19.9

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

720789

### **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 11.46 tons For GVW of less than 4 tons, 1.4 tons However, the fuel consumption requirement is the average fuel consumption measured in JE05 mode, which is the fuel consumption standard in Japan.

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

GVW 4 tons or less

## **C7.9**

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

Decreased

## **C7.9a**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Change in emissions (metric tons CO2e)** | **Direction of change** | **Emissions value (percentage)** | **Please explain calculation** |
| Change in renewable energy consumption |  | <Not Applicable> |  |  |
| Other emissions reduction activities | 1437 | Decreased | 0.6 | Last year 1,437 tCO2e were reduced by our emissions reduction projects as described in 4.3a , and our total S1 and S2 emissions in the previous year was 218,109 tCO2e, therefore we arrived at 1.2% through (1,437/ 218,109)\*100= 0.6% |
| Divestment |  | <Not Applicable> |  |  |
| Acquisitions |  | <Not Applicable> |  |  |
| Mergers |  | <Not Applicable> |  |  |
| Change in output | 18807 | Increased | 7.95 | Total sales compared to the previous year 1,065.9 billion yen 1,081.4 billion yen Increase of 1.5 percent |
| Change in methodology | 17857 | Decreased | 7.55 | The electric power company’s CO2 emission decreased from 0.587kg-CO2/kwh to 0.486kg-CO2/kwh Improved by 17.2 percent |
| Change in boundary |  | <Not Applicable> |  |  |
| Change in physical operating conditions |  | <Not Applicable> |  |  |
| Unidentified |  | <Not Applicable> |  |  |
| Other |  | <Not Applicable> |  |  |

## **C7.9b**

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

Market-based

## **C8. Energy**

## **C8.1**

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

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

## **C8.2**

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

|  |  |
| --- | --- |
|  | **Indicate whether your organization undertakes this energy-related activity** |
| Consumption of fuel (excluding feedstocks) | Yes |
| Consumption of purchased or acquired electricity | Yes |
| Consumption of purchased or acquired heat | Yes |
| Consumption of purchased or acquired steam | No |
| Consumption of purchased or acquired cooling | No |
| Generation of electricity, heat, steam, or cooling | Yes |

## **C8.2a**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Heating value** | **MWh from renewable sources** | **MWh from non-renewable sources** | **Total MWh** |
| Consumption of fuel (excluding feedstock) | HHV (higher heating value) | 0 | 701595 | 701595 |
| Consumption of purchased or acquired electricity | <Not Applicable> | 0 | 473106 | 473106 |
| Consumption of purchased or acquired heat | <Not Applicable> | 0 | 2866 | 2866 |
| Consumption of purchased or acquired steam | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of purchased or acquired cooling | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of self-generated non-fuel renewable energy | <Not Applicable> | 290 | <Not Applicable> | 290 |
| Total energy consumption | <Not Applicable> | 290 | 1177566 | 1177856 |

## **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 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)**

Diesel

### **Heating value**

HHV (higher heating value)

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

65925

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

0

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

65625

### **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

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

Liquefied Natural Gas (LNG)

### **Heating value**

HHV (higher heating value)

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

256949

### **MWh fuel consumed for the 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**

256949

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

Town Gas

### **Heating value**

HHV (higher heating value)

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

352151

### **MWh fuel consumed for the 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**

352151

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

Liquefied Petroleum Gas (LPG)

### **Heating value**

HHV (higher heating value)

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

8051

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

0

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

8051

### **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

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

Kerosene

### **Heating value**

HHV (higher heating value)

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

726

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

0

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

726

### **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

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

Fuel Oil Number 1

### **Heating value**

HHV (higher heating value)

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

16111

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

0

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

0

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

16111

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

<Not Applicable>

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

0

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

Motor Gasoline

### **Heating value**

HHV (higher heating value)

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

1682

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

0

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

1682

### **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

## **C8.2d**

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

### **Diesel**

### **Emission factor**

2.58

### **Unit**

kg CO2e per liter

### **Emission factor source**

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

### **Comment**

### **Fuel Oil Number 1**

### **Emission factor**

2.71

### **Unit**

kg CO2e per liter

### **Emission factor source**

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

### **Comment**

### **Kerosene**

### **Emission factor**

2.94

### **Unit**

kg CO2e per liter

### **Emission factor source**

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

### **Comment**

### **Liquefied Natural Gas (LNG)**

### **Emission factor**

2.7

### **Unit**

metric tons CO2e per metric ton

### **Emission factor source**

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

### **Comment**

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

### **Emission factor**

3

### **Unit**

metric tons CO2e per metric ton

### **Emission factor source**

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

### **Comment**

### **Motor Gasoline**

### **Emission factor**

2.32

### **Unit**

kg CO2e per liter

### **Emission factor source**

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

### **Comment**

### **Town Gas**

### **Emission factor**

2.24

### **Unit**

kg CO2e per m3

### **Emission factor source**

Data released by the supplier

### **Comment**

## **C8.2e**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Total Gross generation (MWh)** | **Generation that is consumed by the organization (MWh)** | **Gross generation from renewable sources (MWh)** | **Generation from renewable sources that is consumed by the organization (MWh)** |
| Electricity | 140662 | 140662 | 290 | 290 |
| Heat | 76384 | 76384 | 0 | 0 |
| Steam | 16111 | 16111 | 0 | 0 |
| Cooling | 0 | 0 | 0 | 0 |

## **C8.2f**

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

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

Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company

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

Solar PV

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

290

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

0

### **Comment**

## **C-TO8.4**

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

### **Activity**

Heavy Duty Vehicles (HDV)

### **Metric figure**

638

### **Metric numerator**

tCO2

### **Metric denominator**

Life cycle (please explain assumptions)

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

638

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

1

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

98

### **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**

189

### **Metric numerator**

tCO2

### **Metric denominator**

Life cycle (please explain assumptions)

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

189

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

1

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

99

### **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

## **C9. Additional metrics**

## **C9.1**

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

### **Description**

Energy use

### **Metric value**

1177566

### **Metric numerator**

### **Metric denominator (intensity metric only)**

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

0.1

### **Direction of change**

Decreased

### **Please explain**

## **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**

Vehicle using LPG/CNG

### **Metric figure**

6

### **Metric unit**

Units

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

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

### **Activity**

Heavy Duty Vehicles (HDV)

### **Investment start date**

April 1 2018

### **Investment end date**

March 31 2021

### **Investment area**

R&D

### **Technology area**

Electrification

### **Investment maturity**

Applied research and development

### **Investment figure**

5000000000

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

0-20%

### **Please explain**

Development-level prototype vehicles: We plan to conduct full-scale prototype production this year.

### **Activity**

Heavy Duty Vehicles (HDV)

### **Investment start date**

April 1 2017

### **Investment end date**

March 31 2020

### **Investment area**

Products

### **Technology area**

Alternative fuels

### **Investment maturity**

Pilot demonstration

### **Investment figure**

600000000

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

61-80%

### **Please explain**

Verification project with the Ministry of the Environment: In fiscal 2017, we utilized a large amount of verification project costs in the construction of new gas supply equipment and vehicle development.

## **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 and/or Scope 2 emissions and attach the relevant statements.**

### **Scope**

Scope 1

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

Annual process

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

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

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

Third party verification/assurance underway

### **Attach the statement**

[Verification Report for Isuzu Motors Limited\_rev0 .pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/l__qMLRO50ioYONsokKnaw/VerificationReportforIsuzuMotorsLimitedrev0.pdf)

### **Page/ section reference**

### **Relevant standard**

ISO14064-3

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

100

[Verification Report for Isuzu Motors Limited\_rev0 .pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/l__qMLRO50ioYONsokKnaw/VerificationReportforIsuzuMotorsLimitedrev0.pdf)

### **Scope**

Scope 2 location-based

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

Annual process

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

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

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

Third party verification/assurance underway

### **Attach the statement**

[Verification Report for Isuzu Motors Limited\_rev0 .pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/l__qMLRO50ioYONsokKnaw/VerificationReportforIsuzuMotorsLimitedrev0.pdf)

### **Page/ section reference**

### **Relevant standard**

ISO14064-3

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

100

[Verification Report for Isuzu Motors Limited\_rev0 .pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/l__qMLRO50ioYONsokKnaw/VerificationReportforIsuzuMotorsLimitedrev0.pdf)

## **C10.1b**

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

### **Scope**

Scope 3- all relevant categories

### **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

### **Attach the statement**

[Verification Report for Isuzu Motors Limited\_rev0 .pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/l__qMLRO50ioYONsokKnaw/VerificationReportforIsuzuMotorsLimitedrev0.pdf)

### **Page/section reference**

### **Relevant standard**

ISO14064-3

## **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 in which you participate.**

### **Japan carbon tax**

### **Period start date**

April 1 2017

### **Period end date**

March 31 2018

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

100

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

38030377

### **Comment**

Carbon tax in Japan is levied on fossil fuels and calculated based on the amount of fossil fuels used. Electric power-related costs cannot be calculated, so they are not included.

## **C11.1d**

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

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)

## **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**

Information collection (understanding supplier behavior)

### **Details of engagement**

Collect climate change and carbon information at least annually from suppliers

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

100

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

100

### **% 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 2017 for our suppliers as a boost to their energy-saving activities. We use Green Purchasing Guidelines as our purchasing standard. 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.

### **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

### **Size of engagement**

50

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

41.5

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

Based on its Scope 3 emissions results, Isuzu Motors’ percentage of customers’ use phase emissions in Category 11 is 82.9%. 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.

## **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**

The Japan Vehicle Manufacturer’s Association (JAMA)

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

Consistent

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

The Japan Vehicle Manufacturer’s 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, or are you attempting to, influence the 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/QRI7PTXPKUqRQsvx-jo93Q/csrreportnew.pdf)

### **Content elements**

Governance

Strategy

Emissions figures

Emission targets

Other metrics

Other, please specify (Ref P9,P18,P20-23,P25,P30)

### **Publication**

In other regulatory filings

### **Status**

Complete

### **Attach the document**

[h30.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/AQdH91JT8EKQ2be_3mpktQ/h30.pdf)

### **Content elements**

Governance

Strategy

Risks & opportunities

Other, please specify (Ref P10-P12,P21)

## **C14. Signoff**

## **C-FI**

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

## **C14.1**

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

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