# **Nissan Motor Co., Ltd. - Climate Change 2020**

## **C0. Introduction**

## **C0.1**

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

Established in Yokohama, Kanagawa in 1933, Nissan Motor Co., Ltd. currently manufactures vehicles in approximately 20 countries around the world. The company is headquartered in Yokohama, Japan, and is part of the Renault-Nissan-Mitsubishi Alliance. Operating with more than 136,000 employees globally, Nissan sold more than 4.9 million vehicles and generated revenue of 9.8 trillion JPY in fiscal 2019. Nissan delivers a comprehensive range of over 70 models under the Nissan, Infiniti and Datsun brands. In 2010, Nissan introduced the pure-electric vehicle Nissan LEAF, the first mass-market vehicle launched globally, which maintains its position as the best-selling EV in history and a leader in zero-emission mobility. The all-electric crossover SUV new Nissan Ariya was unveiled in July 2020, representing the Nissan NEXT transformation plan.

## **C0.2**

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

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

## **C0.3**

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

Australia

Brazil

Canada

China

Egypt

Finland

France

Germany

Hungary

India

Indonesia

Italy

Japan

Mexico

Netherlands

Russian Federation

South Africa

Spain

Switzerland

Thailand

United Kingdom of Great Britain and Northern Ireland

United States of America

Viet Nam

## **C0.4**

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

JPY

## **C0.5**

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

Financial control

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

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

Light Duty Vehicles (LDV)

## **C1. Governance**

## **C1.1**

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

Yes

## **C1.1a**

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

|  |  |
| --- | --- |
| **Position of individual(s)** | **Please explain** |
| Director on board | The Director on Board, Executive Vice President and Deputy Alliance EVP who oversees Manufacturing and Supply Chain Management operation is responsible for climate-related issues. Nissan considers that climate-related issues are more directly related to these activities. This fact justifies the participation of this Director in the Global Environmental Management Committee (G-EMC) meetings as a co-chair for ensuring authoritative decision-making. In 2017, Director on board, along with other executives, authorized the next mid-term environmental program toward 2022 and dubbed as Nissan Green program 2022 (NGP2022) at G-EMC. Climate change is among the 4 major action pillars, and we set the target for the product as a 40% reduction of CO2 emission from new cars, and for corporate activity, 30% reduction of CO2 emission per vehicle sold. This decision covers the entire global operation of the Nissan operations and facilities. This Director on Board is also a member of Nissan’s Internal Control Committee, which, among other attributions, is responsible for investigating group-wide potential risks and business opportunities, and revising the company’s “risk and opportunity map” in line with impact, frequency, and control level. Climate change has been explicitly included in the FY19 "risk and opportunity map" as a risk related to Nissan’s "business strategies and maintenance of competitive edge". |

## **C1.1b**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Frequency with which climate-related issues are a scheduled agenda item** | **Governance mechanisms into which climate-related issues are integrated** | **Scope of board-level oversight** | **Please explain** |
| Scheduled – some meetings | Reviewing and guiding strategy  Reviewing and guiding major plans of action  Reviewing and guiding risk management policies  Reviewing and guiding annual budgets  Reviewing and guiding business plans  Setting performance objectives  Monitoring implementation and performance of objectives  Overseeing major capital expenditures, acquisitions and divestitures  Monitoring and overseeing progress against goals and targets for addressing climate-related issues | <Not Applicable> | [How the governance mechanism “Reviewing and guiding risk management policies” contributes to the board’s oversight of the climate issues.] Nissan conducts risk management meetings to identify and update significant corporate risks. The Board Member in charge of Internal Control is responsible for reporting climate-related risks and opportunities to the Board of Directors biannually, among other matters. The Board of Directors then makes decisions at the corporate level including overall environmental risks and policies, which are brought for detailed discussion in the Global Environmental Management Committee meetings. The outcomes of these meetings, in turn, inform the mapping and revision of climate-related risks and opportunities by the Internal Control Committee. The Board Member in charge of Internal Control is finally responsible for reporting revisions in the climate-related risk assessment to the Board of Directors. The risks and business opportunities are managed in line with the Board of Directors’ direction for the preparation of action plans, which are to be implemented by various departments. |

## **C1.2**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of the position(s) and/or committee(s)** | **Reporting line** | **Responsibility** | **Coverage of responsibility** | **Frequency of reporting to the board on climate-related issues** |
| Chief Sustainability Officer (CSO) | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable> | Quarterly |

## **C1.2a**

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

Nissan formulates its environmental strategy based on materiality assessment of management risk factors, analyzing the company's crucial issues and opportunities for both Nissan and its stakeholders.

In order to promote environmental management on a global basis, the CSO, altogether with an appointed Director on Board as co-chair, presides over the Global Environmental Management Committee (G-EMC) twice a year to assess and determine overall policies and content, including climate-change actions, and monitor outcomes of the implementation of environmental action plans. The CSO is considered by Nissan the most suitable person to bear this responsibility due to organizational knowledge to conduct effective environmental management regarding climate-related issues. Hierarchically, through G-EMC meetings, the CSO informs the Director on Board, who is also a member of the Internal Control Committee, for the revision of climate-related risks. These risks are then ultimately reported the Board of Directors for decision-making.

Company-wide management of sustainability activities are the responsibility of the Global Sustainability Steering Committee chaired by the same CSO. The committee meets biannually and includes management representatives from functions involved with the environmental, traffic safety, diversity and inclusion, and other areas. Each function is responsible for advancing its own activities, and progress is reported to the committee to manage the PDCA cycle of improving sustainability performance. The Global Sustainability Steering Committee report to the Executive Committee, Nissan’s highest decision-making body, which is governed by the Board of Directors to make decisions on policies and future initiatives.

Based on the agreed overall policies, the CSO directs the head of the Environmental Strategy Group to develop plans, accompany specific actions and environmental programs that are to be implemented at regions or sites, with the main objective of ensuring the achievement of the Nissan Green Program's CO2 emission reduction targets. These are managed through KPIs that are associated with Corporate and Product CO2 emission reductions; all KPIs are monitored by the Environmental Strategy Group with specific areas, such as manufacturing sites CO2 reduction or logistics, being the direct responsibilities of other divisions within Nissan. Climate-related environmental performance in KPI terms is reported in the G-EMC meetings.

## **C1.3**

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

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

## **C1.3a**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Entitled to incentive** | **Type of incentive** | **Activity inventivized** | **Comment** |
| All employees | Monetary reward | Please select | Financial remuneration for individual performance in achieving emissions reduction targets. Employees in energy management-related service lines are expected to reduce GHG to achieve our emissions reduction target (to reduce global corporate CO2 emissions per vehicle), from both climate change mitigation and cost reduction perspectives. Suggestions or proposals are made through small working groups, then evaluated by the executives and awarded with monetary reward depending on their achievement levels. |
| All employees | Monetary reward | Please select | Financial remuneration for individual performance in achieving emissions reduction targets. In Japan, and at some of our overseas facilities, employee participation in and contribution to environmental initiatives are included as a part of the “commitment and target” of each employee’s annual performance objectives. The results of these activities are evaluated according to how well they have achieved their targets and reflected in the performance-based component of their compensation. Nearly 90% of Nissan’s Scope3 emissions is from “use of sold products.” In order to mitigate these emissions, promoting sales of vehicles with outstanding fuel economy and zero-emission vehicles such as EV is essential. Employee’s “commitment and target,” system closely related to the sales expansion or promotion of EV, and their performance is reflected in the compensation. |
| All employees | Non-monetary reward | Please select | Exceptional contributions to environmental activities will be awarded in various ways. Managers present their workers with personal thank-you cards, and employees are honored with the Nissan Prizes presented by the CEO and with awards given by factory chiefs. We seek to improve our systems for promoting environmental consciousness among employees. |
| Chief Executive Officer (CEO) | Monetary reward | Please select | Efficiency targets are set for the CEO, as related to the efficiency in terms of energy consumption and cost. Energy-related matters are a fundamental element in Total delivered Cost (TdC) management, providing a basis for a compensation incentive. Any improvements in terms of energy efficiency will be translated into emissions reduction of the group as a whole. |
| Other, please specify (Chief Competitive Officer (CCO)) | Monetary reward | Please select | Efficiency targets are set for the CCO, a position which encompasses oversight of global manufacturing, supply chain management, and R&D. Energy-related matters are a fundamental element in Total delivered Cost (TdC) management, providing a basis for a compensation incentive in terms of energy efficiency and cost reduction. This is directly related to emissions reduction of the group as a whole. |
| Director on board | Monetary reward | Please select | The Executive Vice-President/Director on Board who oversees Production has the mission to reduce energy costs and increase energy efficiency at Nissan's production facilities, as energy-related matters are a fundamental element in Total delivered Cost (TdC) management. This provides a basis for a compensation incentive in terms of energy efficiency and cost reduction, which is ultimately related to emissions reduction of the group as a whole. |

## **C2. Risks and opportunities**

## **C2.1**

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

Yes

## **C2.1a**

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | **From (years)** | **To (years)** | **Comment** |
| Short-term | 0 | 3 |  |
| Medium-term | 3 | 6 |  |
| Long-term | 6 | 30 |  |

## **C2.1b**

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

[Substantive financial or strategic impact]

For Nissan, risk refers to any factor that may prevent the group from achieving its business objectives, and opportunity refers to any potential business areas for securing long-term competitiveness. Risks with long time frames of more than 10 years are also considered. We have a department dedicated exclusively to risk and opportunity management, which gauges the risks and explores opportunities arising from products and manufacturing as related to climate change. The Global Environment Management Committee, co-headed by our Executive Vice-President/Director on board, who oversees production activities, works closely together with this department.

[Description of quantifiable indicator]

As a general figure, when identifying and assessing risks, including climate related-risks, we regard over 0.1% of our annual sales as a substantive financial impact.

## **C2.2**

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

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

Direct operations

Upstream

Downstream

### **Risk management process**

Integrated into multi-disciplinary company-wide risk management process

### **Frequency of assessment**

More than once a year

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

Short-term

Medium-term

Long-term

### **Description of process**

Risks monitored and considered include those driven by regulatory (e.g. CO2 regulation on automobiles), physical (e.g. change in precipitation extremes and droughts), and other factors (e.g. changing consumer behaviour) in throughout our supply chain, including direct operations, upstream and downstream. [Scope] For Nissan, risk refers to any factor that may prevent the group from achieving its business objectives, and opportunity refers to any potential business areas for securing long-term competitiveness. Risks with short time, medium time, and long time frames of more than 10 years are also considered. We have a department dedicated exclusively to risk and opportunity management, which gauges the risks and explores opportunities arising from products and manufacturing as related to climate change. The Global Environment Management Committee, co-headed by our Executive Vice-President/Director on board, who oversees production activities, works closely together with this department. [Identification and assessment at company level] Our climate-related risk management is integrated into multi-disciplinary company-wide risk management process. Based on its Global Corporate Management Policy, the department carries out interviews with corporate officers more than once a year for investigating group-wide potential risks/business opportunities, and revises the company’s “risk and opportunity map” in line with impact, frequency and control level. The Executive Committee makes decisions at corporate level biannually and gives direction for the management and development of action plans related to risks and business opportunities. Moreover, the Board Member in charge of Internal Control, who is a member of the Executive Committee, reports to the Board of Directors also biannually. [Identification and assessment at asset level] Each division is responsible for assessing risk impacts and creating a plan for long-term management. The divisions also prepare measures to be put in place when issues do materialize. We are strengthening information sharing through intranet portal throughout the group to subsidiaries and affiliated companies worldwide. Since 2008, Nissan started the Employee-Initiated Evaluation System to encourage employees to think proactively and propose ideas to improve the company’s environmental performance while achieving business goals. As a general figure, when identifying and assessing risks, including climate related-risks, we regard over 0.1% of our annual sales as a substantive financial impact. Specifically, followings are considered in downstream and upstream climate-related risk as a result of assessments [Upstream risk] There is a trend to introduce more renewable energy to mitigate climate change. Especially in Japan, with the temporary nuclear power plants shut down since the Fukushima nuclear disaster in 2011, the GHG emission factors in the country have increased. The catastrophic event resulted in the transition from nuclear power to fossil fuels, with the general public pressuring utilities to introduce more renewables in their mix such as solar power. Consequently, utilities including TEPCO, the major electricity supplier for Nissan's operations in Japan, started to require a surcharge for the introduction of renewables. Although Nissan encourages the introduction of renewable energies through direct investments in Japan and through electricity purchases through Nissan Green Program, it is fundamental to understand the cost increases this may cause as well as the change in the GHG emissions balance per power output throughout the company. In FY17, for example, taking into consideration external factors, Nissan increased its share of renewables in Japan, which led to a total cost rise of approximately 1%. Thanks to our on-going energy-saving programs and purchasing team efforts, we were able to abate this cost rise more than 1%. Similar events and/or growing public pressure for the transition to renewables may also cause further surcharges for large electricity consumers including Nissan in other areas. This specific risk is included within the Environment/Climate Change risk, which is included in the “Risks Related to Business Strategies and Maintenance of Competitiveness” category in the company’s “risk and opportunity map” used for risk assessments. [Downstream risk] Controlling downstream CO2 emissions through our products is an essential part of our strategy to decrease “Well to Wheel” CO2 emissions. Nissan aims to decrease the Well to Wheel CO2 emissions by 90% from 2000 to 2050. If substantial progress is not made against the targets, Nissan may not only face reputation risk but also increase the likelihood of suffering the consequences of climate risks with a potential threat to business continuity. This specific risk is included within the Environment/Climate Change risk, which is included in the “Risks Related to Business Strategies and Maintenance of Competitiveness” category in the company’s “risk and opportunity map” used for risk assessments.

## **C2.2a**

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

|  |  |  |
| --- | --- | --- |
|  | **Relevance & inclusion** | **Please explain** |
| Current regulation | Relevant, always included | CO2 emissions reduction is required by the Act on the Rational Use of Energy in Japan. Large shipment owners, known as “specified consigners”, need to reduce energy use and thus reduce CO2 in the logistics area. Nissan is obliged to submit mid- and long-term plans and a periodic report on energy usage to the authorities. This risk is considered relevant for Nissan as 17% of our production takes place in the country. Nissan's logistics volume in the fiscal year 2019 was 18,560 million ton-km in Japan, with corresponding CO2 emissions amounting to approximately 378,000 ton-CO2. While we are compliant with the Act and achieved more than the expectation of the Japanese government, any insufficient improvements may bring not only reputational risks via public announcements but also potential fines of up to 1 million JPY. This specific risk is included within the Environment/Climate Change risk, which is included in the “Risks Related to Business Strategies and Maintenance of Competitiveness” category in the company’s “risk and opportunity map” used for risk assessments. Status of the risks are updated twice a year and reported at G-EMC chaired by the board member. |
| Emerging regulation | Relevant, always included | It is expected that the formulation of regulations on CO2 reduction will be accelerated in both timeframe and reduction intensity globally after Paris Agreement (COP21), especially on the deployment of CAFE reductions for Decarbonization of the automotive industry. Europe, where 15% of our revenue is generated (with a growing sales trend), will have more stringent CO2 regulations in place to achieve 95 gCO2 (M1 PC) and 147 gCO2 (N1 LCV) by 2021. We are currently working to further improve the fuel efficiency of internal combustion engines in the short term to achieve the 2021 targets, and in the longer term, we see the need to bring about more widespread use of electric and fuel cell-powered vehicles, making use of renewable energy sources to provide the power they need. If we can no longer meet market and client expectations, we may be exposed to reputational risks, which may consequently further reduce demand for goods/services, and regulatory penalties. This specific risk is included within the Environment/Climate Change risk, which is incorporated into the “Risks Related to Business Strategies and Maintenance of Competitiveness” category in the company’s “risk and opportunity map” used for risk assessments. |
| Technology | Relevant, always included | With climate-related regulations growing more stringent in some regions, it is critical for our industry to keep up with regulatory requirements by developing innovative technologies and products. Nissan has been a frontrunner in the area of EVs (recognized as a leader in terms of total mass-production EV sales), having sold 620,000 full-EVs globally up to 2019. This also means that losing our competitiveness in the market of EVs may pose risks if technological innovation lags behind the industry peers, with a loss of our current competitive advantage. Climate change is a fundamental pillar in Nissan’s environment and risk strategy. The deployment of EVs is one of the conditions for Nissan to maintain its market competitiveness while tackling climate-related risk. Therefore, it is included within the Environment/Climate Change and Product Strategy risks, which are incorporated within the “Risks Related to Business Strategies and Maintenance of Competitiveness” category in the company’s “risk and opportunity map” used for risk assessments. |
| Legal | Relevant, always included | Although the regulatory environment has gradually developed in favor of EVs, and consumer acceptance of this product has grown, the EVs market is yet to mature. If Nissan or other players face major litigation related to EVs, the risk of loss of consumer confidence in EVs may also increase. Having the biggest market share in the EVs market (620,000 full-EVs sold globally up to 2019), litigations against EV and its effects on consumer behavior could potentially be more detrimental to Nissan than other players. Legal issues are included in the Environment/Climate Change and Product Strategy risks, which are incorporated into the “Risks Related to Business Strategies and Maintenance of Competitiveness” category in the company’s “risk and opportunity map” used for risk assessments. |
| Market | Relevant, always included | Climate change has increased consumer demand for vehicles with improved GHG emissions performance. Especially given the continued increase of urbanization, consumers face congestion problems and spend more time idling in gridlock conditions, consequently reducing fuel efficiency and increasing GHG emissions. With increasing concerns regarding environmental issues and fuel inefficiency, it is expected that customers will no longer just demand products with good fuel efficiency performance with a shift to smaller vehicles, but also products equipped with smart mobility technology which can help to provide a full-fledged solution to mobility. Nissan needs to respond to these changing customer preferences, which have already started being addressed with the release of a series of technological innovations, and accessory products including a navigation system supporting eco-driving. Our INFINITI brand which relatively carries a larger segment and more luxurious cars may be especially affected by this point of view. This particular issue is included within the Environment/Climate Change and Product Strategy risks, which are incorporated into the “Risks Related to Business Strategies and Maintenance of Competitiveness” category in the company’s “risk and opportunity map” used for risk assessments. |
| Reputation | Relevant, always included | If Nissan or other players face major litigation related to EVs, a loss of consumer confidence in EVs could affect Nissan’s sales and become a dragging factor for the EVs market growth. In this scenario, Nissan, having the biggest market share in the EVs market (620,000 full-EVs sold globally up to 2019), could potentially suffer the largest impacts compared to other OEMs, as a result of changes in consumer behavior. The deployment of EVs is one of the conditions for Nissan to maintain its market competitiveness while tackling climate-related risk. Therefore, this risk is included within the Environment/Climate Change, Product Strategy and Compliance/Reputation risks, which are incorporated into the “Risks Related to Business Strategies and Maintenance of Competitiveness” category in the company’s “risk and opportunity map” used for risk assessments. |
| Acute physical | Relevant, always included | Climate change may increase the frequency of extreme weather events, such as typhoons, droughts, floods, and heavy snowfall, causing catastrophic damage to company operations. Nissan currently operates in regions where extreme weather is frequently observed, such as Thailand and India, and where production or operation could be severely affected (e.g. instability in inbound logistics from suppliers, causing delays). For example in FY16, Nissan's plant in Chennai, India was severely affected by the Cyclone Vardah, and more than 1,100 vehicles were damaged at our plant and port causing significant financial loss. Acute physical events, including natural disasters which may have been influenced by climate change, are classified as risks within the “Risks related to Business Continuity” category in the company’s “risk and opportunity map” used for risk assessments. This specific risk is managed with an over-arching Disaster Recovery organization with an established decision-making scheme and reporting lines for each Nissan facility. |
| Chronic physical | Relevant, always included | Europe’s temperature variations can be notably large. Mediterranean countries such as Spain or Italy are particularly subject to very high temperatures sometimes exceeding 50°C. Further increases in the potential of extreme temperatures might affect the attractiveness of our electric vehicles because of the lower autonomy range resulting from the extensive use of the air conditioning. It would also increase CO2 and other emissions for maintaining a stably cool in-cabin environment and optimal function of the engine. As Nissan’s zero-emissions strategy is strongly based on the adoption of EVs with zero tailpipe emissions, our market penetration and sales volume in the aforementioned countries could be reduced. The deployment of EVs is one of the conditions for Nissan to maintain its market competitiveness while tackling climate-related risk. Therefore, this risk is included within the Environment/Climate Change and Product Strategy risks, which are incorporated into the “Risks Related to Business Strategies and Maintenance of Competitiveness” category in the company’s “risk and opportunity map” used for risk assessments. |

## **C2.3**

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

Yes

## **C2.3a**

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

### **Identifier**

Risk 1

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

Direct operations

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

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

### **Primary potential financial impact**

Increased direct costs

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

<Not Applicable>

### **Company-specific description**

It is expected that the formulation of regulations on CO2 reduction will be accelerated in both timeframe and reduction intensity globally after Paris Agreement (COP21), especially on the deployment of CAFE reductions for Decarbonization of the automotive industry. Europe, where 15% of our revenue is generated (with growing sales trend), will have more stringent CO2 regulations in place to achieve 95 gCO2 (M1 PC) and 147 gCO2 (N1 LCV) by 2021. We are currently working to further improve the fuel efficiency of internal combustion engine models sold in Europe including Qashqai in the short term to achieve the 2021 targets, and in the longer term, we see the need to bring about more widespread use of electric and fuel cell-powered vehicles, making use of renewable energy sources to provide the power they need. If we can no longer meet market and client expectations, we may be exposed to reputational risk (which may consequently further reduce demand for goods/services) and regulatory penalties.

### **Time horizon**

Short-term

### **Likelihood**

Very likely

### **Magnitude of impact**

High

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

Yes, a single figure estimate

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

6000000000

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

<Not Applicable>

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

<Not Applicable>

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

Nissan's model range will comply with European CO2 regulations and therefore no financial impact is expected. However, the potential impact of non-compliance could be significant; in FY19 Nissan sold 523,000 units in Europe, and exceeding the regulatory limit by 1g of CO2 for that sales volume could lead to a penalty of around 6 billion JPY, with a potential drawback in sales in the region due to reputational issues.

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

112000000000

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

[Situation] More stringent CO2 regulation is in place, especially in Europe. [Task] Nissan’s ambitious long term vision of reducing CO2 emissions from our vehicles by 90% in 2050 is aligned with the European transport Decarbonization strategy and will allow complying with European regulation. [Action] The six-year environmental plan, the Nissan Green Program 2022 will contribute to substantial improvements in average CO2 emissions from new vehicles. The target is to reduce average emissions by 40% as compared to 2000 levels for Nissan vehicles sold in Japan, China, Europe, and the United States. Nissan Europe monitors the annual CO2 emissions for new vehicles and also possesses a reliable data tool to assist in emissions forecasting. [Result] The data allows forecasting future levels of CO2 emissions for the coming years, while the cross-functional structure allows the regional executives to anticipate any risk and assess the progress made towards Nissan mid-term commitments and long term vision. A 35% CO2 emission reduction was achieved in FY19 compared with 2000 levels on a corporate average for all Nissan vehicles sold in Japan, China, Europe, and the US. [Cost of management] The Renault-Nissan Alliance has announced that Alliance Ventures will invest up to $1 billion (112 billion JPY) by 2022 to support open innovation of next-generation mobility. Investment domains including New Mobility, Autonomous Driving, Connected Services, EV & Energy, and Enterprise 2.0., and 40% of the total contribution is responsible for Nissan.

### **Comment**

### **Identifier**

Risk 2

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

Downstream

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

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

### **Primary potential financial impact**

Decreased revenues due to reduced demand for products and services

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

<Not Applicable>

### **Company-specific description**

Climate change has increased consumer demand for vehicles with improved GHG emissions performance. Especially given the continued increase of urbanization, consumers have to face congestion problems and spend more time idling in gridlock conditions, whilst fuel efficiency would be reduced and more GHG would be emitted. With such concern about environmental problems, fuel inefficiency, and time wastage, it is expected that customers will no longer just demand products with good fuel efficiency performances with a shift to smaller size vehicles, but also smart mobility technology. Nissan has already started responding to these changing customer preferences via eco-driving support technology such as Eco Mode enabled CVT (Continuously Variable Transmission). Our INFINITI brand, highly regarded for its advanced design and powerful performance in each of its markets, maybe especially affected because of its relatively larger and more luxurious car models.

### **Time horizon**

Short-term

### **Likelihood**

Likely

### **Magnitude of impact**

Medium-high

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

Yes, a single figure estimate

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

10000000000

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

<Not Applicable>

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

<Not Applicable>

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

Our INFINITI brand which relatively carries a larger segment and more luxurious cars may be especially affected by the shift of consumer preference. In case we cannot meet customer demand for improved fuel efficiency and smart mobility technology, we might experience a decrease in demand. This may lead to a 1% profit loss for INFINITI brand, which affects at least 0.1% of Nissan's total revenue which is around 10 billion JPY in FY2019.

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

112000000000

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

[Situation] Given the continued increase of urbanization, and consumers having to face congestion problems and spending more time idling in gridlock conditions, consumers are demanding vehicles with better fuel efficiency and emissions performance. [Task] Nissan innovates new technology for connected cars that can help improve environmental performances. [Action] One of Nissan's technology derived from connected car is a smart transport system using data communication between vehicles, infrastructure, drivers, and the driving environment. It guides the driver to identify the latest route, helps improve average speed, supports eco-driving and contributes to improving the average fuel economy. The average travel time was reduced by 16.2% and the average fuel economy was improved by 7.8% in the Los Angeles area driving experiment. [Result] Nissan aims to attract more customers with products having improved environmental performance, and has been successful in gradually increasing their demand. [Cost of management] Nissan will be responsible for contributing the Alliance Ventures which will invest up to $1 billion (112 billion JPY) by 2022 to support open innovation of next-generation mobility. Investment domains including New Mobility, Autonomous Driving, Connected Services, EV & Energy, and Enterprise 2.0, Alliance starts a joint venture capital fund, which will mainly focus on R&D in areas such as electrification, autonomous systems, and connectivity, and 40% of the total contribution is responsible for Nissan.

### **Comment**

### **Identifier**

Risk 3

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

Upstream

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

|  |  |
| --- | --- |
| Market | Other, please specify (Increased cost of energy) |

### **Primary potential financial impact**

Increased direct costs

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

<Not Applicable>

### **Company-specific description**

There is a trend to introduce more renewable energy to mitigate climate change. Especially in Japan, with the temporary nuclear power plants shut down since the Fukushima nuclear disaster in 2011, the GHG emission factor in the country has increased. The catastrophic event resulted in the transition from nuclear power to fossil fuels, with the general public pressuring utilities to introduce more renewables in their mix such as solar power. Consequently, utilities including TEPCO, the major electricity supplier for Nissan's operations in Japan, started to require a surcharge for the introduction of renewables. Although Nissan encourages the introduction of renewable energies through direct investments and electricity purchases through Nissan Green Program, it is fundamental to understand the cost increases this may cause as well as the change in the GHG emissions balance per power output throughout the company. In FY17, for example, taking into consideration external factors, Nissan increased its share of renewables in Japan, which led to a total cost rise of approximately 1%. Thanks to our on-going energy-saving programs and purchasing team efforts, we were able to abate this cost rise more than 1%. Similar events and/or growing public pressure for the transition to renewables may also cause further surcharges for large electricity consumers including Nissan in other areas.

### **Time horizon**

Short-term

### **Likelihood**

Very likely

### **Magnitude of impact**

Medium

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

Yes, a single figure estimate

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

2000000000

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

<Not Applicable>

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

<Not Applicable>

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

Our domestic manufacturing plants are mainly powered by Tokyo Electric Power Company (TEPCO), which has introduced a surcharge for solar energy promotion. If the tariff for corporate rates increases by an expected 17%, electricity cost could increase by nearly 2 billion JPY.

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

2000000000

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

[Situation] Climate change may accelerate the trend to switch to renewable energy for decarbonization. Electricity cost in Japan is increasing due to surcharges for renewables. [Task] Nissan works on reduction of energy purchase through energy conservation activities at sites, and introduced its own renewable energy generation facilities. Our Nissan Green Program 2022 has set targets to reduce CO2 emissions in manufacturing by 36% (t-CO2/vehicle produced) in 2022 globally, and 1%/year in offices and dealers' in Japan. [Action] One important example of sales dealers’ activity was the installation of 10kW of solar panels saving 12% in electricity costs from FY13. Nissan advises dealers to implement energy conservation activities, and some achieved 50% in energy reduction. Nissan also manages the cost of renewable energy purchases through registering as a member of Japan's Power Producers and Suppliers (PPS). Through the use of mixed supply energy procurement and leasing rooftop space, Nissan can now procure cheaper renewable energy and, depends less on suppliers. The rate of renewable energy usage was increased from 8% before the introduction of PPS and Mix Supply Scheme to 16% after the introduction. [Result] In FY19, PPS system supply around 760 retail outlets in Japan with around 123,000 MWh of energy, with an annual reduction of some 1,045 tons of CO2. [Cost of management] Approximate cost of energy conservation activities in Japan is around 2 billion. which is calculated from the additional cost of 13 - 23 JPY/KWh x 1000 x 123,000 Mwh)

### **Comment**

### **Identifier**

Risk 4

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

Direct operations

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

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

### **Primary potential financial impact**

Increased direct costs

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

<Not Applicable>

### **Company-specific description**

Climate change may increase the frequency of extreme weather events, such as typhoons, droughts, floods, and heavy snowfall, causing catastrophic damage to company operations. Nissan currently operates in regions where extreme weather is frequently observed, such as Thailand and India, and where production or operation could be severely affected (e.g. instability in inbound logistics from suppliers, causing delays). For example in FY16, Nissan's plant in Chennai, India was severely affected by the Cyclone Vardah, and more than 1,100 vehicles were damaged at our plant and port causing significant financial loss.

### **Time horizon**

Short-term

### **Likelihood**

Very likely

### **Magnitude of impact**

High

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

Yes, a single figure estimate

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

2300000000

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

<Not Applicable>

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

<Not Applicable>

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

Natural disasters like floods or droughts may shut down the facilities, drown newly assembled cars in the region or stop production lines due to insufficient water, but such local extreme weather conditions are unlikely to occur simultaneously in all regions. Taking the Chennai cyclone in India as an example, more than 1,100 vehicles were damaged at our plant/port leading to a significant loss in terms of revenues that amount to approximately 2.3 billion JPY.

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

6000000

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

[Situation] Some of our production sites may be exposed to extreme weather conditions in the near future. [Task] We need to draw up our supply chain business continuity plan (BCP), from the cases in Thailand and Japan, which have started adopting them since 2014, and expand the scope to regions with high water risk. [Action] BCP includes assessment of work priorities for each function, and development of countermeasures for managing natural disaster risk. A task force has been set up to gather information about employees’ safety and the damage situation of facilities and to work for business continuity. We expanded our scope of consideration to include establishing similar supply chain BCPs for other operations in China, India, North America, and Europe. We also promoted the visualization of the supply chain via steps to ensure smooth initial response by ascertaining supply chain conditions and measures to address anticipated risks in advance. [Result] Our supply chain BCPs has covered major production sites. The promotion of visualization of the supply chain in steps can ensure smooth initial response by ascertaining supply chain conditions and measures to address anticipated risks in advance. It allowed our Chennai plant in India to be fully equipped, and handled the emergencies well with proper mitigation during the cyclone event. [Cost of management] Human resource costs associated with these activities are more than 6 million JPY.

### **Comment**

## **C2.4**

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

Yes

## **C2.4a**

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

### **Identifier**

Opp1

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

Direct operations

### **Opportunity type**

Products and services

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

Development and/or expansion of low emission goods and services

### **Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

### **Company-specific description**

After the Paris Agreement, countries started mobilizing to develop solutions for decarbonization with the objective of creating more sustainable mobility patterns. EU and ACEA are responding to future mobility challenges addressing the growing demand for eco-friendly transport and mobility. A standard for autonomous driving will also be established in near future in the EU, which has the additional benefit of minimizing emissions and optimize driving behavior. This trend offers opportunities for Nissan to promote its zero-emission vehicles (EVs) and autonomous-driving technology features. These technologies have been developed to help realize an emission-free and accident-free society. Nissan is a pioneer in the development of EVs, and the market introduction of the pure-electric vehicle Nissan LEAF, the first mass-market vehicle launched globally, is a starting point for maintaining competitive advantage and expansion in this market.

### **Time horizon**

Short-term

### **Likelihood**

Virtually certain

### **Magnitude of impact**

High

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

Yes, a single figure estimate

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

3000000000

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

<Not Applicable>

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

<Not Applicable>

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

Currently, our major markets for EVs are the US, Japan, China, and Europe; assuming that global EV sales can be increased by 1% in the upcoming year compared to the 100,000 units in FY19, an additional 3 billion JPY may be obtained in revenue.

### **Cost to realize opportunity**

44800000000

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

[Situation] There is a trend to seek solutions for decarbonization after COP21. [Task] Nissan promotes its vehicles using clean energy through EVs and with autonomous features. Nissan, which owns the world's all-time best selling 100% electric vehicle LEAF, is a leader in promoting the adoption of eco-cars, as well as a new technology for connected cars with improved vehicle environmental performance. [Action] The six-year environmental plan, Nissan Green Program 2022 focuses on the reduction of carbon footprint. Moreover, Nissan continues to innovate by developing new technologies like "single-lane control" and "multiple-lane control" for assisting drivers to deal with heavy and stop-and-go traffic, further helping to reduce carbon emissions. Nissan unveiled a world first in driver assistance technology, combining navigated highway driving with hands-off single-lane driving capabilities. This ProPILOT system will debut on the Japanese-market Nissan Skyline in the fall of 2019. [Result] More than 100,000 units of EVs have been sold in FY19, resulting in cumulative sales reaching more than 620,000 units, globally. Only in FY19, this remarkable feat has helped to keep more than 430,000 tons of CO2 from being emitted. [Cost to realize opportunity] Nissan will be contributing 44.8 billion JPY for a new joint venture capital fund by the Nissan-Renault-Mitsubishi Alliance, focusing on R&D in areas such as electrification, autonomous systems, and connectivity. This 44.8 billion JPY represents 40% of the total contribution amount of the Nissan-Renault-Mitsubishi Alliance 112 billion JPY for a new joint venture capital fund by the Nissan-Renault-Mitsubishi Alliance, focusing on R&D in areas such as electrification, autonomous systems, and connectivity.

### **Comment**

### **Identifier**

Opp2

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

Direct operations

### **Opportunity type**

Products and services

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

Development and/or expansion of low emission goods and services

### **Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

### **Company-specific description**

More stringent CO2 emissions regulations in Japan, US, EU, China, where approximately 90% of our production and sales occur, encourage production and use of smaller segment vehicles with more advanced fuel-efficient technologies. Maximizing energy efficiency to reduce fuel consumption and CO2 emissions from non-electric vehicles is another branch of Nissan’s activities: the R&D efforts are directed toward improving the fuel economy of engine-powered vehicles. Our unique and award-winning e-POWER has been a hit with consumers in Japan, where it's helped make the Nissan Note the country's best-selling registered car. Combining 100% electric motor drive with a gasoline engine that charges the battery, e-POWER cars give customers instant, smooth acceleration, and excellent fuel efficiency.

### **Time horizon**

Short-term

### **Likelihood**

Very likely

### **Magnitude of impact**

Medium-high

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

Yes, a single figure estimate

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

15000000000

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

<Not Applicable>

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

<Not Applicable>

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

Europe, an environmentally conscious region, had a total market sales volume of 523,000 vehicles in the fiscal year 2019. If Nissan secures an additional 1% of the revenues, our net revenues would increase by approximately 15 billion JPY (this figure includes electric and conventional engine-powered vehicles).

### **Cost to realize opportunity**

44800000000

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

[Situation] There is a trend towards more stringent CO2 emissions regulations and demand for more fuel-efficient vehicles. [Task] Nissan has to improve the fuel economy of engine-powered vehicles to reduce fuel consumption and meet the stringent regulations on fuel economy. [Action] NGP2022, the company's fourth environmental mid-term plan, will contribute to substantial improvements in average CO2 emissions from Nissan newly produced vehicles. The target is to reduce average emissions by 40% as compared to 2000 levels for Nissan vehicles sold in Japan, China, Europe, and the United States. Advanced technologies can be adopted from small segments to large segment cars to improve the fuel efficiency of non-EV vehicles. [Result] Cumulative global sales of more than 620,000 EV units in FY2019; average CO2 emissions from new vehicles (t-CO2/km) have decreased by 35% as compared to 2000 levels. The further expansions in EV sales and development of more advanced technologies to decrease fuel efficiency will contribute to Nissan's achievement of the 40% reduction target by 2022. [Cost to realize opportunity] Nissan will be responsible for contributing with 44.8 billion, 40% of a figure of 112 billion JPY, as the Nissan-Renault-Mitsubishi Alliance starts a joint venture capital fund, which will mainly focus on R&D in areas such as electrification, autonomous systems, and connectivity.

### **Comment**

### **Identifier**

Opp3

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

Direct operations

### **Opportunity type**

Products and services

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

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

### **Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

### **Company-specific description**

Climate change may cause more intense and frequent extreme weather events with greater temperature fluctuation and higher incidence of lightning; those severe weather conditions may result in increased electricity grid failures and create unexpected demands for electricity. Nissan's electric vehicles have the onboard battery capacity to light up one average house in Japan for 2 to 4days with an advanced power supply system. In the case of natural disasters or blackout periods, prompt disaster recovery is crucial. We see EV batteries along with the vehicle to home/building energy supply system as playing a key role in the restoration of electrical power. We expect a growth in demand for disaster risk reduction systems, and this creates additional benefits to the ownership of EVs. Nissan has collaborated with other parties and has been expanding its V2X (Vehicle-to-Home, Vehicle-to-Grid electricity supply) such as activities pilot projects in Japan, the EU, and the US. In the next 5 years, it is expected that the commercialization of V2X solutions will expand substantially, thereby facilitating Nissan’s market development in the field.

### **Time horizon**

Medium-term

### **Likelihood**

Very likely

### **Magnitude of impact**

Medium-high

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

Yes, a single figure estimate

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

14000000000

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

<Not Applicable>

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

<Not Applicable>

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

Currently, around 140,000 Nissan LEAF are circulating in Japan. Considering their potential market, the purchase of a Power Control System for emergency electricity provision would bring additional revenue at around 14 billion JPY (calculated assuming that 25% of LEAF owners could potentially have purchased the Power Control System together with the vehicle).

### **Cost to realize opportunity**

44800000000

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

[Situation] Many Japanese people suffer electric outages caused by concentrated heavy rain, lightning, and temperature fluctuations. Only in 2015, there were 10,832 blackout incidents in Japan, in which 37% of them were caused by such extreme weather events. There is a growing need for the installation of emergency power systems. [Task] Nissan seeks to improve EV availability to reduce disaster risk, from the provision of backup electricity source using EVs. [Action] Our "LEAF to Home" power supply system can supply electricity from batteries mounted on EV to homes when used in conjunction with the "EV Power Station" unit. "LEAF to Home" is an industry-first backup power supply system that can transmit the electricity stored in the large-capacity batteries of EVs to a residential home. This can be used as a back-up power source in case of power outages. Nissan participated in the Third UN World Conference on Disaster Risk Reduction to demonstrate how to adopt EV as a vitally important aid to people's lives. [Result] 3,700 units "LEAF to Home" power supply system have been sold, which contributes to approximately 1.5 billion of JPY revenue stream. [Cost to realize opportunity] Nissan will be contributing with 44.8 billion, 40% of a figure of 112 billion JPY, as Nissan-Renault-Mitsubishi Alliance starts a joint venture capital fund, which will mainly focus on R&D. The development of "LEAF to Home"-related technologies are included as a fraction of the total amount.

### **Comment**

## **C3. Business Strategy**

## **C3.1**

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

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

## **C3.1a**

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

Yes, qualitative and quantitative

## **C3.1b**

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

|  |  |
| --- | --- |
| **Climate-related scenarios and models applied** | **Details** |
| RCP 2.6 | Nissan’s long-term target was first set in 2006. The 2 degrees C scenario on the IPCC Third Assessment Report was set in a scenario to stabilize atmospheric CO2 under 550 ppm. Nissan has used the IPCC 2°C scenario as a major scientific source of reference as it is a consensus of scientists around the world. To achieve this, we analyzed quantitatively, using the desired global CO2 emissions in 2050 from the scenario and the estimated vehicle volume in 2050 in IEA’s Mobility Model as inputs, that the “Well-to-Wheel (WtW)” CO2 emissions of new vehicles in 2050 will need to be reduced by 70% from 2000 levels in case of Nissan. According to the 450 ppm scenarios of Category I in IPCC’s Fourth Assessment Report released in 2008, global absolute CO2 emission levels in 2050 would have to half those of 2000. By taking this new report into account, Nissan realized that further CO2 emission reductions would be necessary, and recalculated its new WtW as a 90% reduction of Product CO2 emissions in 2050 as compared to 2000 levels. During the analysis, our value chain including product use, is considered as a part of “Well-to-Wheel (WtW)” target. And our R&D and production areas were and still remain the main areas to be considered in the development of targets. The year 2050 is considered as a suitable time horizon for the development of a long term target and climate scenarios, as we are experiencing significant changes including EV, self-driving cars, connected cars in the automotive sector. Next-generation technologies expected to be developed and deployed by 2050 have been considered in consultation with R&D areas to develop emission reduction targets. The result of the scenario analysis has been used to set the long term environmental targets, which, in turn, has been incorporated into Nissan’s business strategy. As a result, for instance, Nissan is aiming to sell 1 million electrified vehicles annually – either pure electric models or those with e-POWER powertrains – by the fiscal year 2023, as part of its Nissan NEXT. |

## **C3.1d**

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

|  |  |  |
| --- | --- | --- |
|  | **Have climate-related risks and opportunities influenced your strategy in this area?** | **Description of influence** |
| Products and services | Yes | More stringent CO2 emissions regulations in Japan, US, EU, China, where approximately 90% of our production and sales occur, encourage production and use of smaller segment vehicles with more advanced fuel-efficient technologies. Maximizing energy efficiency to reduce fuel consumption and CO2 emissions for non-electric vehicles is another branch of Nissan’s R&D activities. Our advanced technology is being prepared to provide all our customers with vehicles having outstanding fuel economy, in the pure electric vehicles, e-POWER, and conventional engine-powered vehicles. Europe, an environmentally conscious region, had a total market sales volume of 523,000 vehicles in the fiscal year 2019. If Nissan secures an additional 1% of the sale, our net sales would increase by approximately 15 billion JPY (this figure includes electric and conventional engine-powered vehicles). This impact may be observed by 2030 given that this is the target year many countries have set as the deadline year to curtail vehicle CO2 emissions in the EU; this financial impact is also dependent on the consolidation of the EV market, and Nissan will continue to put effort into maintaining its leadership position in the field. |
| Supply chain and/or value chain | Yes | There is a trend to introduce more renewable energy to mitigate climate change. Especially in Japan, with the temporary nuclear power plants shut down since the Fukushima nuclear disaster in 2011, the GHG emission factors in the country have increased. The catastrophic event resulted in the transition from nuclear power to fossil fuels, with the general public pressuring utilities to introduce more renewables in their mix such as solar power. Consequently, utilities including TEPCO, the major electricity supplier for Nissan's operations in Japan, started to require a surcharge for the introduction of renewables. Although Nissan encourages the introduction of renewable energies through many internal programs in Japan and through electricity purchases, it is fundamental to understand the cost increases this may cause as well as the change in the GHG emissions balance per power output throughout the company. In FY18, for example, taking into consideration external factors, Nissan increased its share of renewables in Japan, which led to a total cost rise of approximately 1%. Thanks to our on-going energy-saving programs and purchasing team efforts, we were able to abate this cost rise more than 1%. Similar events and/or growing public pressure for the transition to renewables may also cause further surcharges for large electricity consumers including Nissan in other areas. |
| Investment in R&D | Yes | Climate change has increased consumer demand for vehicles with outstanding GHG emission performances. It is expected that customers no longer just demand products with good fuel efficiency performance shifting to smaller size vehicles, but also smart mobility technology. Nissan needs to respond to these changing customer preferences via eco-driving support technology. Our INFINITI brand which relatively carries a larger segment and more luxurious cars may be especially affected. The Nissan-Renault-Mitsubishi Alliance has announced the launch of a joint venture capital fund that will mainly focus on R&D in areas such as electrification, autonomous systems, and connectivity, which further contribute to the transition to less energy-intensive and low-carbon mobility. Nissan will be responsible for 40% of the 112 billion JPY fund over 5 years. |
| Operations | Yes | Some countries where Nissan operates, such as Thailand and India, have a relatively high extreme weather event risk. For example in FY16, Nissan's plant in Chennai, India was highly influenced by Cyclone Vardah. As a result, more than 1,100 vehicles were damaged at our plant/port leading to a significant loss in terms of sales that amount to approximately 1 billion JPY. |

## **C3.1e**

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

|  |  |  |
| --- | --- | --- |
|  | **Financial planning elements that have been influenced** | **Description of influence** |
| Row 1 | Revenues | More stringent CO2 emissions regulations in Japan, US, EU, China, where approximately 90% of our production and sales occur, encourage production and use of smaller segment vehicles with more advanced fuel-efficient technologies. Maximizing energy efficiency to reduce fuel consumption and CO2 emissions from non-electric vehicles is another branch of Nissan’s R&D activities. Our advanced technology is being prepared to provide all our customers with vehicles having outstanding fuel economy, in the pure electric vehicles, e-POWER, and conventional engine-powered vehicles. Europe, an environmentally conscious region, had a total market sales volume of 523,000 vehicles in the fiscal year 2019. If Nissan secures an additional 1% of the sale, our net sales would increase by approximately 15 billion JPY (this figure includes electric and conventional engine-powered vehicles). The influence of this more stringent CO2 emission regulation continues toward 2030 and further accelerate beyond to reach carbon neutral in 2050. |

## **C3.1f**

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

## **C4. Targets and performance**

## **C4.1**

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

Both absolute and intensity targets

## **C4.1a**

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

### **Target reference number**

Abs 1

### **Year target was set**

2017

### **Target coverage**

Company-wide

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

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

### **Base year**

2000

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

135000000

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

100

### **Target year**

2030

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

5

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

128250000

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

156000000

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

-311.111111111111

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

Underway

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

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

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

Scope1, 2, and 3 emissions targets include the use of sold products. The percentages presented here were calculated based on absolute emissions reduction compared to year 2000 as base year. We set our mid-term and long-term absolute targets for 2030 and 2050, respectively, starting from 2017. In the mid-term, Nissan will not be able to reach an average year-on-year reduction between 2017 and 2030 of at least 2.1%; on the contrary, a slight absolute emissions increase of 0.8% a year is expected to be observed for this period. However, according to our internal study, Nissan predicts that the penetration of its EVs will accelerate substantially in the long term, and absolute CO2 emissions will drop steeply from the mid-2030s. Indeed, the average year-on-year reduction between 2017 and 2050 is 2.12%, which means that the contribution of EVs is one of the most important aspects in our long-term goal of reducing absolute emissions according to our target. The percentages were calculated dividing the difference in emissions between start year and target year in relation to base year emissions. In 2008, Nissan realised that further reductions also in terms of intensity may be necessary as suggested by the IPCC’s Fourth Assessment Report. 450ppm represents the scenarios of Category I, and change in global CO2 emissions 2050 need to be half (50%) of 2000 which is re-calculated in WtW as -90% in 2050, which is an intensity target applied for new vehicles (in g-C02/km). In order to translate -50% absolute IPCC requirement to the WtW -90% intensity, the estimated 2050 vehicle volume shown in IEA’s Mobility Model is adopted. Nissan understands that current IPCC’s Fifth Assessment Report needs to revise its base year to 2010, and SBT methods are following the calculations accordingly. Nissan believes that the base year 2000 scenario is equivalent or more stringent than the 2010 scenarios. Nissan has submitted the SBT for Target Quality Check to SBTI.

### **Target reference number**

Abs 2

### **Year target was set**

2017

### **Target coverage**

Company-wide

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

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

### **Base year**

2000

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

135000000

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

100

### **Target year**

2050

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

50

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

67500000

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

156000000

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

-31.1111111111111

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

Underway

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

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

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

Scope1, 2, and 3 emissions targets include the use of sold products. The percentages presented here were calculated based on absolute emissions reduction compared to year 2000 as base year. We set our mid-term and long-term absolute targets for 2030 and 2050, respectively, starting from 2017. In the mid-term, Nissan will not be able to reach an average year-on-year reduction between 2017 and 2030 of at least 2.1%; on the contrary, a slight absolute emissions increase of 0.8% a year is expected to be observed for this period. However, according to our internal study, Nissan predicts that the penetration of its EVs will accelerate substantially in the long term, and absolute CO2 emissions will drop steeply from the mid-2030s. Indeed, the average year-on-year reduction between 2017 and 2050 is 2.12%, which means that the contribution of EVs is one of the most important aspects in our long-term goal of reducing absolute emissions according to our target. The percentages were calculated dividing the difference in emissions between start year and target year in relation to base year emissions. In 2008, Nissan realised that further reductions also in terms of intensity may be necessary as suggested by the IPCC’s Fourth Assessment Report. 450ppm represents the scenarios of Category I, and change in global CO2 emissions 2050 need to be half (50%) of 2000 which is re-calculated in WtW as -90% in 2050, which is an intensity target applied for new vehicles (in g-C02/km). In order to translate -50% absolute IPCC requirement to the WtW -90% intensity, the estimated 2050 vehicle volume shown in IEA’s Mobility Model is adopted. Nissan understands that current IPCC’s Fifth Assessment Report needs to revise its base year to 2010, and SBT methods are following the calculations accordingly. Nissan believes that the base year 2000 scenario is equivalent or more stringent than the 2010 scenarios. Nissan has submitted the SBT for Target Quality Check to SBTI, and the verifications to the Science Based Target Initiatives is under process.

## **C4.1b**

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

### **Target reference number**

Int 1

### **Year target was set**

2017

### **Target coverage**

Company-wide

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

Scope 1+2 (market-based)

### **Intensity metric**

Metric tons CO2e per metric ton of ore processed

### **Base year**

2005

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

0.81

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

100

### **Target year**

2022

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

30

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

0.567

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

-18

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

0

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

0.53

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

115.22633744856

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

Underway

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

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science Based Targets initiative

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

NGP2022, the company's fourth environmental mid-term plan, will contribute to substantial improvements in corporate CO2 emissions (t-CO2/vehicle produced) from Nissan's manufacturing and non-manufacturing facilities. The mid-term target to be reached in 2022 is to reduce average emissions by 30% as compared to 2005 levels for Nissan's corporate activities emissions, whereas the long-term target is set at 80% emissions reduction by 2050.

### **Target reference number**

Int 2

### **Year target was set**

2006

### **Target coverage**

Company-wide

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

Scope 1+2 (market-based)

### **Intensity metric**

Metric tons CO2e per vehicle produced

### **Base year**

2005

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

0.81

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

100

### **Target year**

2050

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

80

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

0.162

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

-58

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

0

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

0.53

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

43.2098765432099

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

Underway

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

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science Based Targets initiative

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

NGP2022, the company's fourth environmental mid-term plan, will contribute to substantial improvements in corporate CO2 emissions (t-CO2/vehicle produced) from Nissan's manufacturing and non-manufacturing facilities. The mid-term target to be reached in 2022 is to reduce average emissions by 30% as compared to 2005 levels for Nissan's corporate activities emissions, whereas the long-term target is set at 80% emissions reduction by 2050.

### **Target reference number**

Int 3

### **Year target was set**

2017

### **Target coverage**

Product level

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

Scope 3: Use of sold products

### **Intensity metric**

Metric tons CO2e per kilometer

### **Base year**

2000

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

209

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

100

### **Target year**

2022

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

40

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

125.4

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

0

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

32

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

135.85

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

87.5

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

Underway

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

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science Based Targets initiative

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

NGP2022, the company's fourth environmental mid-term plan, will contribute to substantial improvements in average CO2 emissions from Nissan's newly produced vehicles. The target is to reduce average emissions by 40% as compared to 2000 levels for Nissan vehicles sold in major markets. This is in-line with the IPCC's report to change in global CO2 emissions 2050 need to be half (50%) of 2000 which is re-calculated in WtW as -90% in 2050, which is an intensity target applied for new vehicles (in g-C02/km). The above 40% represents the 2022 milestone of the path toward 2050.

### **Target reference number**

Int 4

### **Year target was set**

2006

### **Target coverage**

Product level

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

Scope 3: Use of sold products

### **Intensity metric**

Metric tons CO2e per kilometer

### **Base year**

2000

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

209

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

100

### **Target year**

2050

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

90

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

20.9

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

0

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

-50

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

135.85

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

38.8888888888889

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

Underway

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

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science Based Targets initiative

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

In 2008, Nissan realised that further reductions also in terms of intensity may be necessary as suggested by the IPCC’s Fourth Assessment Report. 450ppm represents the scenarios of Category I, and change in global CO2 emissions 2050 need to be half (50%) of 2000 which is re-calculated in WtW as -90% in 2050, which is an intensity target applied for new vehicles (in g-C02/km).

## **C4.2**

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

No other climate-related targets

## **C4.3**

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

Yes

## **C4.3a**

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

|  |  |  |
| --- | --- | --- |
|  | **Number of initiatives** | **Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked \*)** |
| Under investigation | 160 | 55126 |
| To be implemented\* | 3 | 420 |
| Implementation commenced\* | 19 | 6186 |
| Implemented\* | 29 | 8669 |
| Not to be implemented | 14 | 5276 |

## **C4.3b**

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

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

|  |  |
| --- | --- |
| Energy efficiency in production processes | Compressed air |

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

1013

### **Scope(s)**

Scope 2 (location-based)

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

31000000

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

33000000

### **Payback period**

1-3 years

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

11-15 years

### **Comment**

Monitor and minimize the use of compressed air

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

|  |  |
| --- | --- |
| Energy efficiency in production processes | Fuel switch |

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

530

### **Scope(s)**

Scope 1

Scope 2 (location-based)

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

9000000

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

20000000

### **Payback period**

1-3 years

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

11-15 years

### **Comment**

Maximize the process use of solar heat

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

|  |  |
| --- | --- |
| Energy efficiency in buildings | Motors and drives |

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

1437

### **Scope(s)**

Scope 2 (location-based)

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

40000000

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

47000000

### **Payback period**

1-3 years

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

11-15 years

### **Comment**

Minimize lighting volume, and replace to use LED lighting in the buildings.

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

|  |  |
| --- | --- |
| Energy efficiency in production processes | Motors and drives |

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

2882

### **Scope(s)**

Scope 2 (location-based)

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

27000000

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

46000000

### **Payback period**

1-3 years

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

11-15 years

### **Comment**

Install VFD and replace inverters for the motor.

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

|  |  |
| --- | --- |
| Non-energy industrial process emissions reductions | Process equipment replacement |

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

81

### **Scope(s)**

Scope 2 (location-based)

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

12000000

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

13000000

### **Payback period**

1-3 years

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

11-15 years

### **Comment**

Replacement of air valves to low pressure-loss type

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

|  |  |
| --- | --- |
| Energy efficiency in production processes | Smart control system |

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

2726

### **Scope(s)**

Scope 1

Scope 2 (location-based)

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

39000000

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

88000000

### **Payback period**

1-3 years

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

11-15 years

### **Comment**

Smart control of boiler and air dryer applications

## **C4.3c**

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

|  |  |
| --- | --- |
| **Method** | **Comment** |
| Financial optimization calculations | Marginal Abatement Cost Curves (i.e. expected emission avoidance per CAPEX) are applied to prioritize and evaluate potential emissions reduction activities proposed by the member of energy management in each facilities. |

## **C4.5**

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

Yes

## **C4.5a**

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

### **Level of aggregation**

Group of products

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

Our customers’ Scope 1 emissions from fleet vehicle use can be reduced by substituting internal combustion engine vehicles with EVs. Electricity usage may increase and Scope 2 emissions would be influenced, but since electricity can be generated from various sources, an overall reduction in CO2 emissions can be expected in many countries. Our well-to-wheel analysis shows that switching from fossil-fuel-powered vehicles to EVs increases energy efficiency and thus reduces CO2 emissions. If renewable energy is used to charge EVs then well-to-wheel emissions could approach a zero figure.

### **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**

The EU Taxonomy for environmentally sustainable economic activities

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

2.4

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

<Not Applicable>

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

<Not Applicable>

### **Comment**

Average use in Japan may decrease annual CO2 emissions of 0.63 tonnes per vehicle if switched from an equivalent internal combustion vehicle. In FY2019, cumulative sales of Nissan LEAF EV reached 470,000 units globally. These vehicles may reduce annual CO2 output by 296,000 tons in a single year. Additionally, adding up sales data of other EV commercial vehicles sold mainly in China, the total EV sales figure reaches 623,000 units.

## **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 2005

### **Base year end**

March 31 2006

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

1050000

### **Comment**

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

### **Base year start**

April 1 2005

### **Base year end**

March 31 2006

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

1840000

### **Comment**

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

### **Base year start**

April 1 2005

### **Base year end**

March 31 2006

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

1840000

### **Comment**

## **C5.2**

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

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

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

## **C6. Emissions data**

## **C6.1**

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

### **Reporting year**

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

765370

### **Start date**

<Not Applicable>

### **End date**

<Not Applicable>

### **Comment**

## **C6.2**

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

### **Row 1**

### **​Scope 2, location-based​**

We are reporting a Scope 2, location-based figure

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

We are reporting a Scope 2, market-based figure

### **Comment**

## **C6.3**

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

### **Reporting year**

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

2337703

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

2173236

### **Start date**

<Not Applicable>

### **End date**

<Not Applicable>

### **Comment**

## **C6.4**

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

Yes

## **C6.4a**

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

### **Source**

Companies with 500 employees or less

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

Emissions are not relevant

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

Emissions are not relevant

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

Emissions are not relevant

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

Based on past studies, we have excluded emissions from manufacturing facilities emitting very small amounts of CO2, and other group companies and dealers with 500 employees or less emitting negligible amounts of CO2 as compared to the total CO2 emissions. Our internal data in the past showed that emissions from excluded facilities represent approximately 1% of summed Scope 1 and 2 emissions volume.

## **C6.5**

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

### **Purchased goods and services**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

15620000

### **Emissions calculation methodology**

Activity data: Based on production volume from financial results document (Kessan Tanshin) and financial information (Yukashoken-Houkokusho) in IR library. Emission factors: Based on CFP (Carbon Footprint) pilot project conducted by the Japanese government and JEMAI (Japan Environmental Management Association for Industry). Also, Nissan internal data for vehicle material ratio was used. Methodology: Multiply regional production volume and material use ratio, and convert each material volume to CO2 emissions with emission factors

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

### **Please explain**

### **Capital goods**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

994000

### **Emissions calculation methodology**

Activity data: Based on facility investments from financial results document (Kessan Tanshin) and financial information (Yukashoken-Houkokusho) in IR library. Emission factors: Based on 3EID (Embodied Energy and Emission Intensity Data for Japan Using Input-Output Tables) from the National Institute for Environmental Studies in Japan. Methodology: Multiply regional facility investments with 3EID emission factors.

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

### **Please explain**

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

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

358000

### **Emissions calculation methodology**

Activity data: Based on annual energy and fuel procurement data. Emission factors: Based on a combination of actual data from the energy supplier, IEA energy balance table, and CFP pilot project conducted by the Japanese government and JEMAI (Japan Environmental Management Association for Industry). Methodology: Multiply annual energy and fuel usage with each emission factors of above.

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

### **Please explain**

### **Upstream transportation and distribution**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

583000

### **Emissions calculation methodology**

Activity data: Based on annual logistics CO2 data disclosed in the Sustainability Report. Emission factors: Actual CO2 data from transportation suppliers were used. Methodology: Annual regional logistics including parts procurement from suppliers, transportation of knockdown parts, complete vehicles, and service parts are used to create total emissions.

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

### **Please explain**

### **Waste generated in operations**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

171000

### **Emissions calculation methodology**

Activity data: Based on annual waste generated data. Emission factors: Based on CFP pilot project conducted by the Japanese government and JEMAI (Japan Environmental Management Association for Industry). Methodology: Manifest of generated waste in Japan was used to create a global waste profile. Each waste material was multiplied by emission factors for total emissions.

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

### **Please explain**

### **Business travel**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

221000

### **Emissions calculation methodology**

Activity data: Based on the number of regional employees. Emission factors: Actual data within R&D for overseas and domestic business trips were used to create per employee CO2 factors. Methodology: Total employee numbers for Nissan Motor Co. and its five main manufacturing subsidiaries were multiplied by per employee CO2 factors.

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

### **Please explain**

### **Employee commuting**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

238000

### **Emissions calculation methodology**

Activity data: Based on the number of regional employees. Emission factors: Based on 3EID (Embodied Energy and Emission Intensity Data for Japan Using Input-Output Tables) from the National Institute for Environmental Studies in Japan. Also, factors from the Global Fuel Economy Initiative, IEA and Japan Environmental Management Association for Industry - JEMAI, were utilized. Methodology: Each commuting style (i.e. rail, buses, own car, etc.) was multiplied by their respective emission factors.

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

### **Please explain**

### **Upstream leased assets**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

### **Please explain**

Category 8 is not applicable as there is no operation of assets that are leased by Nissan.

### **Downstream transportation and distribution**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

760000

### **Emissions calculation methodology**

Activity data: Based on the annual number of car dealers that are not owned by consolidated companies. Emission factors: Based on CFP (Carbon Footprint) pilot project conducted by the Japanese government and JEMAI (Japan Environmental Management Association for Industry). Methodology: Average car dealer’s energy and fuel usage in Japan are multiplied by emission factors and the regional activity data

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

### **Please explain**

### **Processing of sold products**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

8000

### **Emissions calculation methodology**

Activity data: Based on the total weight of annual sales units and the annual knockdown production volume. Emission factors: Based on CFP (Carbon Footprint) pilot project conducted by the Japanese government and JEMAI (Japan Environmental Management Association for Industry). Methodology: Unit sales and knockdown production data were multiplied by per assembly CO2 emission factor.

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

### **Please explain**

### **Use of sold products**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

153428000

### **Emissions calculation methodology**

Activity data: Based on global sales volume from financial results document (Kessan Tanshin) and financial information (Yukashoken-Houkokusho) in IR library. Emission factors: Based on IEA SMP Model. Methodology: Regional sales volume is multiplied by regional annual vehicle travel distance and regional service life of the vehicle. The result is multiplied by IEA emission factor

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

### **Please explain**

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

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

369000

### **Emissions calculation methodology**

Activity data: Based on global sales volume from financial results document (Kessan Tanshin) and financial information (Yukashoken-Houkokusho) in IR library. Emission factors: Based on the report from NEDO (New Energy and Industrial Technology Development Organization) in Japan. Methodology: Multiplying regional sales volume with emission factors.

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

### **Please explain**

### **Downstream leased assets**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

389000

### **Emissions calculation methodology**

Activity data: Based on the actual fleet volume of leasing companies within Nissan Group in Japan Emission factors: Based on CO2 emissions per vehicle calculated by Nissan. Methodology: Actual fleet volume is multiplied by fuel economy and emission factors.

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

### **Please explain**

### **Franchises**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

### **Please explain**

Not relevant as Nissan has no franchise, and based on the fact that all companies within our consolidated boundary are included in the Scope 1 and 2 emissions, and “Downstream transportation and distribution” of the Scope 3 emissions.

### **Investments**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

### **Please explain**

Not relevant, because all companies within our consolidated boundary were included in our Scope 1 and 2 emissions. For the automotive industry, pension fund investment is negligible and will not exceed 0.1% of total Scope 3 emissions.

### **Other (upstream)**

### **Evaluation status**

Not evaluated

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

### **Please explain**

### **Other (downstream)**

### **Evaluation status**

Not evaluated

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

### **Please explain**

## **C6.7**

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

No

## **C6.10**

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

### **Intensity figure**

0.26

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

2938606

### **Metric denominator**

unit total revenue

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

11217600

### **Scope 2 figure used**

Market-based

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

5.2

### **Direction of change**

Increased

### **Reason for change**

Net revenue decreased by 13.5% compared to FY18, though vehicle production output also reduced. As a result, no substantial change was observed in the index, which remained at 0.26 tCO2/million yen.

### **Intensity figure**

0.62

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

2938606

### **Metric denominator**

vehicle produced

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

4930000

### **Scope 2 figure used**

Market-based

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

1.8

### **Direction of change**

Increased

### **Reason for change**

Emission reduction activities including purchasing lower carbon electricity and energy efficiency improvement activities continued at global manufacturing/non-manufacturing sites. The index deteriorated as the plant stopped production in certain places which affected by COVID-19.

## **C7. Emissions breakdowns**

## **C7.1**

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

Yes

## **C7.1a**

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

|  |  |  |
| --- | --- | --- |
| **Greenhouse gas** | **Scope 1 emissions (metric tons of CO2e)** | **GWP Reference** |
| CO2 | 756144 | IPCC Fifth Assessment Report (AR5 – 100 year) |
| CH4 | 4749 | IPCC Fifth Assessment Report (AR5 – 100 year) |
| N2O | 1328 | IPCC Fifth Assessment Report (AR5 – 100 year) |
| HFCs | 3106 | IPCC Fifth Assessment Report (AR5 – 100 year) |
| PFCs | 0 | IPCC Fifth Assessment Report (AR5 – 100 year) |
| SF6 | 43 | IPCC Fifth Assessment Report (AR5 – 100 year) |

## **C7.2**

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

|  |  |
| --- | --- |
| **Country/Region** | **Scope 1 emissions (metric tons CO2e)** |
| Japan | 345425 |
| North America | 173766 |
| Europe | 93601 |
| Other, please specify (Rest of the World) | 152578 |

## **C7.3**

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

By activity

## **C7.3c**

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

|  |  |
| --- | --- |
| **Activity** | **Scope 1 emissions (metric tons CO2e)** |
| Manufacturing activities | 712510 |
| Non-manufacturing activities | 52859 |

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

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Gross Scope 1 emissions, metric tons CO2e** | **Net Scope 1 emissions , metric tons CO2e** | **Comment** |
| Cement production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Chemicals production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Coal production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Electric utility activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Metals and mining production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (upstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (midstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (downstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Steel production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Transport OEM activities | 712510 | <Not Applicable> | The figure represents CO2 emissions for manufacturing activities only. Manufacturing and non-manufacturing emissions amounted to 712,510 and 52,859 metric tons CO2, respectively. |
| Transport services activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |

## **C7.5**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Country/Region** | **Scope 2, location-based (metric tons CO2e)** | **Scope 2, market-based (metric tons CO2e)** | **Purchased and consumed electricity, heat, steam or cooling (MWh)** | **Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)** |
| Japan | 932451 | 796808 | 1827099 | 319448 |
| North America | 471150 | 433840 | 1266509 | 441178 |
| Europe | 128342 | 89372 | 360145 | 292401 |
| Other, please specify (Rest of the World) | 805761 | 853216 | 1118769 | 900557 |

## **C7.6**

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

By activity

## **C7.6c**

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

|  |  |  |
| --- | --- | --- |
| **Activity** | **Scope 2, location-based (metric tons CO2e)** | **Scope 2, market-based (metric tons CO2e)** |
| Manufacturing activities | 2100387 | 1974843 |
| Non-manufacturing activities | 237316 | 198394 |

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

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Scope 2, location-based, metric tons CO2e** | **Scope 2, market-based (if applicable), metric tons CO2e** | **Comment** |
| Cement production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Chemicals production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Coal production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Metals and mining production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (upstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (midstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (downstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Steel production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Transport OEM activities | 2100387 | 1974843 | The figures represent CO2 emissions for manufacturing activities only. Location-based manufacturing and non-manufacturing emissions amounted to 2,100,387 and 237,316 metric tons CO2, respectively, whereas market-based emissions amounted to 1,974,843 and 198,394 metric tons CO2, respectively. |
| Transport services activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |

## **C-TO7.8**

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

### **Activity**

Light Duty Vehicles (LDV)

### **Emissions intensity figure**

0.000106

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

153428000

### **Metric denominator**

p.km

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

1452703873000

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

-5.1

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

4930000

### **Vehicle lifetime in years**

17

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

12470

### **Load factor**

1.39

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

The results of Scope 3 emissions have been validated by a third party. In order to respond to this question, emissions intensity, average vehicle lifetime in years, and annual distance in km was calculated based on regional data collected by Nissan for each variable. The change from the previous can be attributed to the reduction in vehicle sales and improvement in the new car emission in FY19. The load factor is an average of the values published by governental statistics across the main regions where Nissan operates (EU: Environment Agency, US: Energy Databook, PRC: World Bank study for transport demand, JPN: Road Bureau of the Ministry of Land, Infrastructure, Transport and Tourism).

## **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 | 25000 | Decreased | 0.8 | In FY2019, Nissan continued the introduction of renewable energy in its facilities. The introduction of new PV facilities in China, the increase in hydropower purchases in Brazil, and grid electricity purchase contracts including renewables in Japan contributed to the reduction of Scope 2 CO2 emissions by approximately 25 ktCO2e. This amount represents approximately a 0.8% reduction compared to the total FY2018 Scope 1 and 2 emissions ((25,000/3,229,327)\*100%). |
| Other emissions reduction activities | 110000 | Decreased | 3.4 | In FY2019, Nissan continued the introduction of lower-carbon fuels in its facilities. The conclusion of the construction of new city gas fuel supply facilities mainly at the Japan sites were responsible for the reduction of Scope 1 CO2 emissions by approximately 110 ktCO2e, mainly substituting heating oil equipment. This amount represents approximately a 3.4% reduction compared to the total FY2018 Scope 1 and 2 emissions ((110,000/3,229,327)\*100%). |
| Divestment |  | <Not Applicable> |  |  |
| Acquisitions |  | <Not Applicable> |  |  |
| Mergers |  | <Not Applicable> |  |  |
| Change in output | 146000 | Decreased | 4.5 | In FY2019, Nissan had a lower production output which resulted in CO2 emissions of approximately 146 ktCO2e less than FY18. This amount represents approximately a 4.5% reduction compared to the total FY2018 Scope 1 and 2 emissions ((146,000/3,229,327)\*100%). |
| Change in methodology |  | <Not Applicable> |  |  |
| Change in boundary |  | <Not Applicable> |  |  |
| Change in physical operating conditions |  | <Not Applicable> |  |  |
| Unidentified |  | <Not Applicable> |  |  |
| Other |  | <Not Applicable> |  |  |

## **C7.9b**

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

Market-based

## **C8. Energy**

## **C8.1**

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

More than 5% but less than or equal to 10%

## **C8.2**

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

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

## **C8.2a**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Heating value** | **MWh from renewable sources** | **MWh from non-renewable sources** | **Total (renewable and non-renewable) MWh** |
| Consumption of fuel (excluding feedstock) | LHV (lower heating value) | 0 | 3847085 | 3847085 |
| Consumption of purchased or acquired electricity | <Not Applicable> | 840913 | 3604467 | 4445380 |
| Consumption of purchased or acquired heat | <Not Applicable> | 0 | 5000 | 5000 |
| Consumption of purchased or acquired steam | <Not Applicable> | 0 | 126811 | 126811 |
| Consumption of purchased or acquired cooling | <Not Applicable> | 0 | 7025 | 7025 |
| Consumption of self-generated non-fuel renewable energy | <Not Applicable> | 12164 | <Not Applicable> | 12164 |
| Total energy consumption | <Not Applicable> | 853077 | 7590387 | 8443465 |

## **C8.2b**

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

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

## **C8.2c**

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

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

Motor Gasoline

### **Heating value**

LHV (lower heating value)

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

241010

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

0

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

241010

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

0

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

0

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

0

### **Emission factor**

0.0023

### **Unit**

metric tons CO2e per liter

### **Emissions factor source**

The GHG Emissions Accounting, Reporting, and Disclosure System under Japan's Act

### **Comment**

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

Kerosene

### **Heating value**

LHV (lower heating value)

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

91315

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

0

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

91315

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

0

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

0

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

0

### **Emission factor**

0.0025

### **Unit**

metric tons CO2e per liter

### **Emissions factor source**

The GHG Emissions Accounting, Reporting, and Disclosure System under Japan's Act

### **Comment**

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

Diesel

### **Heating value**

LHV (lower heating value)

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

23044

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

0

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

23044

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

0

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

0

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

0

### **Emission factor**

0.0026

### **Unit**

metric tons CO2e per liter

### **Emissions factor source**

The GHG Emissions Accounting, Reporting, and Disclosure System under Japan's Act

### **Comment**

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

Fuel Oil Number 1

### **Heating value**

LHV (lower heating value)

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

16287

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

0

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

16287

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

0

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

0

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

0

### **Emission factor**

0.0027

### **Unit**

metric tons CO2e per liter

### **Emissions factor source**

The GHG Emissions Accounting, Reporting, and Disclosure System under Japan's Act

### **Comment**

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

Town Gas

### **Heating value**

LHV (lower heating value)

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

3126933

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

0

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

2323483

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

312693

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

0

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

490757

### **Emission factor**

0.002

### **Unit**

metric tons CO2e per m3

### **Emissions factor source**

The GHG Emissions Accounting, Reporting, and Disclosure System under Japan's Act

### **Comment**

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

Liquefied Petroleum Gas (LPG)

### **Heating value**

LHV (lower heating value)

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

175996

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

0

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

175996

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

0

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

0

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

0

### **Emission factor**

3

### **Unit**

metric tons CO2e per metric ton

### **Emissions factor source**

The GHG Emissions Accounting, Reporting, and Disclosure System under Japan's Act

### **Comment**

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

Coke Oven Gas

### **Heating value**

LHV (lower heating value)

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

172500

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

0

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

172500

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

0

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

0

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

0

### **Emission factor**

2.8

### **Unit**

metric tons CO2e per metric ton

### **Emissions factor source**

The GHG Emissions Accounting, Reporting, and Disclosure System under Japan's Act

### **Comment**

## **C8.2d**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Total Gross generation (MWh)** | **Generation that is consumed by the organization (MWh)** | **Gross generation from renewable sources (MWh)** | **Generation from renewable sources that is consumed by the organization (MWh)** |
| Electricity | 12164 | 12164 | 12164 | 12164 |
| Heat | 0 | 0 | 0 | 0 |
| Steam | 0 | 0 | 0 | 0 |
| Cooling | 0 | 0 | 0 | 0 |

## **C8.2e**

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

### **Sourcing method**

Power purchase agreement (PPA) with a grid-connected generator without energy attribute certificates

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

Hydropower

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

Latin America (LATAM)

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

41890

### **Comment**

Nissan Do Brasil Automoveis Ltda. Purchased electricity generated by 100% hydropower

### **Sourcing method**

Power purchase agreement (PPA) with a grid-connected generator without energy attribute certificates

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

Biomass

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

North America

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

6504

### **Comment**

In 2012 the Aguascalientes facility became the first automotive plant in Mexico, and Nissan’s first plant globally, to use biogas-generated electricity for its manufacturing operations.

### **Sourcing method**

Power purchase agreement (PPA) with a grid-connected generator without energy attribute certificates

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

Wind

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

North America

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

92631

### **Comment**

In January 2013, the plant also started to source electricity generated by wind power stations.

### **Sourcing method**

Other, please specify (On-site wind turbine facilities)

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

Wind

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

Europe

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

8690.9

### **Comment**

Nissan Motor Manufacturing UK Ltd. has on-site wind turbine facilities in the Sunderland plant.

### **Sourcing method**

Power purchase agreement (PPA) with a grid-connected generator without energy attribute certificates

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

Solar

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

Europe

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

3737.71

### **Comment**

Newly installed 19,000 solar panels in FY16 started the generation of 100% renewable energy electricity at Nissan Motor Manufacturing UK Ltd.

### **Sourcing method**

Power purchase agreement (PPA) with on-site/off-site generator owned by a third party with no grid transfers (direct line)

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

Solar

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

Asia Pacific (or JAPA)

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

9898

### **Comment**

DFL Huadu 1 plant installed solar panels in CY17, and started the generation of 100% renewable energy electricity.

### **Sourcing method**

Power purchase agreement (PPA) with on-site/off-site generator owned by a third party with no grid transfers (direct line)

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

Solar

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

Asia Pacific (or JAPA)

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

12319

### **Comment**

DFL Huadu 2 plant installed solar panels in CY17, and started the generation of 100% renewable energy electricity.

### **Sourcing method**

Power purchase agreement (PPA) with on-site/off-site generator owned by a third party with no grid transfers (direct line)

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

Solar

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

Asia Pacific (or JAPA)

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

8330

### **Comment**

ZNA installed solar panels in CY17, and started the generation of 100% renewable energy electricity.

### **Sourcing method**

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

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

Nuclear

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

Europe

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

162752

### **Comment**

Purchasing of 100% Nuclear electricity in the U.K. facilities.

### **Sourcing method**

Power purchase agreement (PPA) with a grid-connected generator without energy attribute certificates

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

Wind

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

Asia Pacific (or JAPA)

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

22694

### **Comment**

In 2016, Renault Nissan Automotive India Private Limited started to source electricity generated by wind power stations.

### **Sourcing method**

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

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

Other, please specify (mix of Solar, Wind, and Hydropower)

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

Asia Pacific (or JAPA)

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

171057.97

### **Comment**

Amount of renewable electricity purchased through the grid in contract with suppliers.

### **Sourcing method**

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

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

Other, please specify (mix of Solar, Wind, and Hydropower)

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

Other, please specify (All regions excluding Japan)

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

309099.03

### **Comment**

Amount of renewable electricity purchased through the grid in contract with suppliers.

## **C-TO8.5**

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

### **Activity**

Light Duty Vehicles (LDV)

### **Metric figure**

0.51

### **Metric numerator**

Other, please specify (Other: Manufacturing CO2 (tCO2e))

### **Metric denominator**

Production: Vehicle

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

2408000

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

4757000

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

4

### **Please explain**

The decrease can be mainly attributed to reductions in production output. However, continuous efforts toward purchasing lower carbon electricity and energy efficiency improvement activities also contributed. The numerator figure represents the sum of Scope 1 and 2 emissions from manufacturing activities only. The denominator represents Nissan vehicle production volume for FY19.

## **C9. Additional metrics**

## **C9.1**

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

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

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

### **Activity**

Light Duty Vehicles (LDV)

### **Metric**

Sales

### **Technology**

Other, please specify (BEV and e-POWER vehicles)

### **Metric figure**

204000

### **Metric unit**

Units

### **Explanation**

BEVs, such as the Nissan LEAF and other electric commercial vehicles from our joint ventures are included in the sum total (89,000 vehicles). The remaining vehicles have e-POWER technology. e-POWER is a 100% electric powertrain making use of EV technology in the Nissan LEAF. A gasoline engine is used to charge the batteries, which provide power to the electric motors that drive the wheels of the vehicle. As with other gasoline-powered and hybrid cars, the e-POWER system uses gasoline as its power source, removing the need to charge the battery. Driven completely by electric motors, it offers driving pleasure equivalent to that of an EV, making it a vehicle with an all-new electric powertrain completely different from the hybrid systems commonly included in compact cars to date.

### **Activity**

Light Duty Vehicles (LDV)

### **Metric**

Sales

### **Technology**

Conventional hybrid

### **Metric figure**

60000

### **Metric unit**

Units

### **Explanation**

Conventional hybrid vehicles sold globally.

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

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

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

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

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

### **Activity**

Light Duty Vehicles (LDV)

### **Technology area**

Infrastructure

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

Small scale commercial deployment

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

≤20%

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

### **Comment**

The batteries used in Nissan's electric vehicles have high residual performance even after the vehicles have been used, and can be reused for various other purposes as an energy storage solution. Since 2018, Japan’s first plant specializing in the reuse and recycling of lithium-ion batteries from electric vehicles have established in the town of Namie in eastern Japan. The factory is operated by 4R Energy Corporation, a joint venture between Nissan and Sumitomo Corporation. The plant will serve as the global center for 4R’s development and manufacturing. The batteries recycled and refabricated at the factory will be used to offer the world’s first exchangeable refabricated battery for electric vehicles, and will also be used in large-scale storage systems. This low-carbon product leads to an absolute reduction in GHG emissions or to the reduced carbon intensity of an activity and has been defined under 22.10 Storage of Energy of EU Taxonomy for Environmentally Sustainable Economic Activities as follows: ...Electricity storage can support the integration of renewable energy systems into electricity transmission and distribution. It can balance centralized and distributed electricity generation, while also contributing to energy security. It will supplement demand response and flexible generation, and complement grid development. It can also contribute to the decarbonization of other economic sectors and support the integration of higher shares of variable renewable energy (variable RES) in transport, buildings, or industry. ...

## **C10. Verification**

## **C10.1**

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

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

## **C10.1a**

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

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

Annual process

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

Complete

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

Limited assurance

### **Attach the statement**

[CDP\_set.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/t1qS8BQgBEG56gPDU4-uKQ/CDPset.pdf)

### **Page/ section reference**

Page 1 - Independent Assurance Report Page 2 - Support letter for CDP disclosure

### **Relevant standard**

ISAE 3410

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

87

## **C10.1b**

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

### **Scope 2 approach**

Scope 2 market-based

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

Annual process

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

Complete

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

Limited assurance

### **Attach the statement**

[CDP\_set.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/t1qS8BQgBEG56gPDU4-uKQ/CDPset.pdf)

### **Page/ section reference**

Page 1 - Independent Assurance Report Page 2 - Support letter for CDP disclosure

### **Relevant standard**

ISAE 3410

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

79

## **C10.1c**

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

### **Scope 3 category**

Scope 3: Use of sold products

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

Annual process

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

Complete

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

Limited assurance

### **Attach the statement**

[CDP\_set.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/t1qS8BQgBEG56gPDU4-uKQ/CDPset.pdf)

### **Page/section reference**

Page 1 - Independent Assurance Report Page 2 - Support letter for CDP disclosure

### **Relevant standard**

ISAE 3410

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

100

### **Scope 3 category**

Scope 3: Employee commuting

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

Annual process

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

Complete

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

Limited assurance

### **Attach the statement**

[CDP\_set.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/t1qS8BQgBEG56gPDU4-uKQ/CDPset.pdf)

### **Page/section reference**

Page 1 - Independent Assurance Report Page 2 - Support letter for CDP disclosure

### **Relevant standard**

ISAE 3410

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

100

## **C10.2**

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

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.**

EU ETS

## **C11.1b**

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

### **EU ETS**

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

5.1

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

0

### **Period start date**

January 1 2019

### **Period end date**

December 31 2019

### **Allowances allocated**

39045

### **Allowances purchased**

0

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

39045

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

0

### **Details of ownership**

Facilities we own and operate

### **Comment**

## **C11.1d**

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

〔Situation〕

At the moment, Nissan has obtained allowances from our Cantabria and Barcelona factories in Spain.

〔Task〕

If we exceed the limit of the allowance given in the area, the extra cost to purchase carbon credits would occur.

〔Action〕

To avoid the extra cost, our manufacturing department has created a strategy to lower our emissions through energy conservation, renewable energy, and process improvements. For instance, around the globe, our plants including ones in Europe learn and share best practices with each other, while Nissan Energy Saving Collaboration (NESCO) diagnoses energy loss at plants in regions where it is active and proposes new energy-saving countermeasures.

Based on this strategy, the manufacturing plants having the greatest potential to obtain emission allowances will be continuously investigated in the EU.

〔Result〕

Through the energy conservation, renewable energy, and process improvements, we succeeded in avoiding the extra cost, as we did not need to purchase the extra credits in FY2019.

We have no plans to acquire external credits at the moment, but when we reach the limit of energy conservation and process improvements, the use of credits may be feasible to achieve carbon-neutral or adapting to more stringent environmental regulation as in EU.

## **C11.2**

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

Yes

## **C11.2a**

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

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

Credit origination

### **Project type**

Fossil fuel switch

### **Project identification**

Energy from wind turbines installed in Nissan Motor Manufacturing UK Ltd’s Sunderland plant created 8,691MWh in FY19, which has been verified by the Renewable Obligation Certificate in the UK.

### **Verified to which standard**

Other, please specify (Renewable Obligation Certificate (UK))

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

2170

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

2170

### **Credits cancelled**

No

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

Voluntary Offsetting

## **C11.3**

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

Yes

## **C11.3a**

### **(C11.3a) Provide details of how your organization uses an internal price on carbon.**

### **Objective for implementing an internal carbon price**

Drive energy efficiency

Identify and seize low-carbon opportunities

### **GHG Scope**

Scope 1

Scope 2

### **Application**

Nissan has ambitious carbon reduction targets of reducing CO2 emissions of global corporate activities by 80% in 2050 compared to FY2005, and reducing CO2 emissions from new vehicles by 90% in 2050 compared to FY2000 levels. In order to achieve these targets, Nissan considers GHG emissions reduction as one of the most crucial parameters in our investment selection process. Proposals are compared and selected based on carbon emissions reduction per unit cost of investment, as well as the energy reduction potential, measured with an internal price of carbon. Nissan has been making great strides in reducing CO2 emissions and improving sustainability in its global corporate activities, while simultaneously increasing vehicle production and plant energy efficiency.

### **Actual price(s) used (Currency /metric ton)**

30000

### **Variance of price(s) used**

The variation of the carbon price used was 5000-80000 yen across various types of projects.

### **Type of internal carbon price**

Shadow price

### **Impact & implication**

At Nissan, the resources for sponsoring environmental improvements in terms of CO2 emissions reduction are negotiated with manufacturing plants, and prioritized/implemented according to carbon price or unit cost to reduce CO2 emissions and timescale for return on investment (ROI). As a general rule, projects with large potential for CO2 reductions, relatively low investment cost and short ROI are prioritized. One of the signature projects is The Nissan Energy Saving Collaboration (NESCO) which received the Chairman's Prize of ECCJ (Energy Conservation Center, Japan) in 2016 for its energy-saving activities across the company. It demonstrates Nissan’s continuous effort in adopting a method of an internal price on carbon in improvement activities for achieving carbon reduction. Besides the NESCO activities, Nissan has invested in various types of equipment such as compressors, pumps, air conditioners, and illumination, to achieve reductions in CO2 emissions. Those investments have cut emissions by about 53,000 tons of CO2 globally in fiscal 2019.

## **C12. Engagement**

## **C12.1**

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

Yes, our suppliers

Yes, our customers

Yes, other partners in the value chain

## **C12.1a**

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

### **Type of engagement**

Information collection (understanding supplier behavior)

### **Details of engagement**

Collect climate change and carbon information at least annually from suppliers

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

43

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

85

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

1

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

We have chosen to engage with approx. 340 Tier 1 suppliers via the CDP Supply Chain Program to further aim for our goal of strengthening supplier engagement. These suppliers are selected to cover the majority of our spend and because we expect Tier 1 suppliers will cooperate with Tier 2 suppliers onwards based on Nissan Green Purchasing Guidelines (GPG). Our suppliers who are engaged are extremely important because they cover 85% of our total spend on purchased materials, as these are key suppliers to our vehicle production. In FY19 we purchased 5.8 million tons of material that included steel, aluminum, etc. from thousands of suppliers to produce our vehicles. Many of these materials require great amounts of water for its manufacture. We have also begun to include Chinese suppliers starting 2019 and onwards because China’s environmental regulations have become more stringent. Suppliers are incentivized to respond to the CDP survey because our GPG explicitly asks Nissan suppliers to do so. Our goal is to implement an environment data survey to promote engagement and reduce environmental impact throughout the values chain and get 100% of our suppliers to comply with Nissan GPG.

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

The CDP Supply Chain Information Request, which we ask our major suppliers to answer, includes questions on climate change related risk assessment, accounting, and targets. Answers from those suppliers are used to understand their recognition of climate change risks and how they have responded to those risks, and to enhance engagement with suppliers. We monitor the response rate and the distribution of scores as the metrics to measure the success of the engagement. Since we started to engage with our major suppliers, we were able to reach a response rate of more than 82% (approximately 22% improvement since the beginning of the engagement ) and observed a higher awareness on suppliers’ part. Given that CDP’s global average response rate was 80% for the 2019 reporting year, Nissan’s overall response rate of 82% shows successful engagement and progress in our goal. Also, the improvement observed in the CDP Supply Chain evaluation provides a gain of momentum in our efforts to strengthen our supplier engagement activities.

### **Comment**

The figure of 1.0% in "% Scope 3 emissions" was calculated by multiplying the number of suppliers responding to the questionnaire and the estimated percentage of Scope 3 emissions of all suppliers. "% Scope 3 emissions" is heavily influenced by the "Use of Sold Products" item which represents almost 90% of our Scope 3 emissions.

## **C12.1b**

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

### **Type of engagement**

Collaboration & innovation

### **Details of engagement**

Run a campaign to encourage innovation to reduce climate change impacts

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

2

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

89

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

<Not Applicable>

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

Our engagement, providing eco-driving support via the car navigation system, builds an important bridge with our customers, allowing Nissan to showcase its technological advancements and the ways which customers can utilize them in order to improve their quality of life. Sales volume of the Chinese market was 1.55 million vehicles in FY19, an decrease of 1.1% compared to the previous year. As this volume is significant for Nissan – it represents about 31% of global sales -, it is very important for Nissan and creating a closer relationship with existing and potential new Chinese clients justifies a rational of effective activities on climate change. Within this rapidly evolving market, around 12,000 ordinary drivers, which is equivalent to 2% of the customers of the annually sold vehicles, were engaged to improve fuel economy through the Portable Navigation Devices.

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

In 2010, Nissan launched eco-driving support provided via the car navigation system, which aims to improve fuel economy by changing drivers’ habits. We utilize travel time reduction and fuel economy improvement as indexes to measure the success of the projects. In one experiment, around 12,000 ordinary drivers in Beijing’s Wangjing district used Portable Navigation Devices with DRGS and eco-driving support. Results from the experiment, which lasted around one year, showed that DRGS cut travel time by 5.1% and increased fuel economy by 7.6%. Enabling drivers to avoid congested roads led to the dispersion of traffic flow, enhancing overall speed within the area. Furthermore, by helping users cultivate better driving habits, eco-driving support increased fuel economy by 6.8%. Nissan is seeking to create new eco-driving projects to showcase technological solutions for reducing CO2 emissions on the customer side. Similar engagement projects will be implemented in other regions, and further developed to include Connected Car initiatives and CO2 emissions monitoring in the future.

## **C12.1d**

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

i) Description

In order to promote the activity to reduce Scope 3 emissions from the use of sold products and engage with all our global employees on combating climate change problems together, Nissan developed a program to provide local incentives to employees to use zero-emission electric vehicles.

ii) Strategy

Since FY2013, Nissan introduced a voluntary and company wide CO2 reduction plan for employees’ car-commuting in Japan. Incentives like priority parking and free electricity charging are provided to employees driving Nissan’s zero-emission vehicle LEAF to major offices and plants. This plan encourages car commuters to shift from internal combustion engine vehicles to Nissan LEAF for reducing CO2 emissions. The objective is to reduce commuting emissions by 1% in ton-CO2/vehicle annually.

## **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?**

Direct engagement with policy makers

Trade associations

Funding research organizations

Other

## **C12.3a**

### **(C12.3a) On what issues have you been engaging directly with policy makers?**

|  |  |  |  |
| --- | --- | --- | --- |
| **Focus of legislation** | **Corporate position** | **Details of engagement** | **Proposed legislative solution** |
| Other, please specify (Zero emission mobility adoption in PRC) | Support | Nissan conducted with China’s Tsinghua University on an EV Simulation Study, which focuses on simulating zero emission vehicle penetration impact in Beijing with traffic data, and supported by the Chinese government and the Beijing government. The project aims at studying the effectiveness of EV penetration in improving air quality in different environments, hence for proposing the best zero emission mobility solution to PRC government to solve the serious particulates and smog problem. Based on the study results, a proposal with implementation recommendations has been made in the China/Beijing congresses in March 2016. The details have been thoroughly discussed at various policy boards organized by the Chinese governments, with 4 new policy guidelines/notices being proposed and endorsed. With such success in the engagement, a new phase of the study started in FY16. | The study proved that EVs can reduce PM2.5 more than PHEV/HEV, and its energy consumption and CO2 emissions (well-to-wheel basis) performances are better as well. Besides, air quality improvements of EV penetration in certain environments is significantly better than in others. Based on the findings, the following recommendations were proposed to the China/ Beijing congresses: (1) city government should control the proportion of electric vehicles to maintain a certain proportion of new vehicles registration (2) EV purchase incentives (financial support) (3) Deployment of charging infrastructure with layout focusing on hot spots and area with high population density based on vehicle probe data collected (4) Usage incentives in parking and plate number registration, etc. (5) electricity price incentives (6) Set electric vehicle demonstration area (7) Deploy High-occupancy Vehicles or EV-only lanes in areas with poor air quality (8) On-demand EV taxi and EV-car sharing in residential area. With the cooperation of the Chinese/ Beijing governments, Phase II of the study is started in FY16 for further studying the impact of EV new mobility services on traffic and environment. |
| Other, please specify (CHAdeMO charging across Europe ) | Support | National Implementation of Alternative Fuels Infrastructure (“AFI”) Directive across Europe - Nissan is influencing the national implementation processes in the Member States ensuring that its position is heard. Following reviews of a number of submissions in early 2016, Nissan (together with Renault) developed some key provisions to serve as a basis for providing guidance to other Member States, which include a proposed wording for a definition of public and private infrastructure. | The engagement can ensure favorable environment on all the necessary technical features to foster EV mass deployment across the EU, and ensure National Policy Frameworks remain favorable for multi standard charging approach (including CHAdeMO, one of the international standardsfor EVs DC charging). |

## **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**

CHAdeMO Association

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

Consistent

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

In order to achieve a zero-emission society, the objective of CHAdeMO is to accelerate electric vehicle adoption by providing drivers with opportunities to quickly charge their battery, alleviating any nervousness, or "range anxiety", they may have. CHAdeMO is the world’s first DC fast-charging standard designed for modern Electric Vehicle. The CHAdeMO Association will continue to push forward with the deployment of charger infrastructure to help bolster the diffusion of electric vehicles for the cause of global warming prevention, in collaboration with stakeholders including various national and local governments all over the world.

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

Our general manager of external affairs is the secretary general of CHAdeMO Association. As a leading manufacturer of mass-produced EV, we strongly support CHAdeMO through deployment of quick charging infrastructure, international or regional standardization, the involvement of global suppliers and utilities, and communication with stakeholders.

### **Trade association**

Japan Automobile Manufacturers Association, Inc.

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

Consistent

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

To achieve significant reductions in CO2 emissions in global road transport, JAMA advocates the adoption of an integrated approach, requiring that initiatives be taken in four areas: increased vehicle fuel efficiency, diversified automotive fuel supply, improved traffic flow, and more efficient vehicle use. Promoting the wider use of next-generation vehicles is one of the key measures to increase vehicles fuel efficiency. JAMA aims to achieve emission reductions, keeping close relationships with the Japanese government including the Ministry of Land, Infrastructure, Transport and Tourism and the Ministry of Economy, Trade and Industry.

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

Our Chief Executive Officer, Makoto Uchida, serves as a director of JAMA. Nissan is actively involved in JAMA's activities in general. As a leading manufacturer of mass-produced EVs, we strongly support JAMA’s next-generation vehicle dissemination. We have introduced EVs to the market and have made concrete proposals based on the information obtained from our findings and users for EV adoption measures, such as subsidies, tax incentives, and infrastructure improvements.

## **C12.3d**

### **(C12.3d) Do you publicly disclose a list of all research organizations that you fund?**

No

## **C12.3e**

### **(C12.3e) Provide details of the other engagement activities that you undertake.**

[1.Smart Grid]

In Japan, there are around 7,000 power conditioners for Vehicle to Home (V2H) use. This makes it possible, for instance, to charge an EV at a time of the day when electricity rates are low to store the electricity in the vehicle. The system also allows the user to store in the vehicle surplus renewable energy generated by a house that consumed later for household uses, thereby helping to reduce CO2 emissions. In Japan, the United States and Europe many EVs are also providing electricity to buildings through Vehicle to Building (V2B) initiatives, and the number of those cases is increasing every year. Both V2H and V2B allow EVs to supply electricity to households, retail stores, and commercial buildings as a backup power source in the case of a power outage during an emergency.

[2. EV Rapid Charging infrastructure]

In 2014, Nissan jointly established a new company, Nippon Charge Service (NCS), with other Japanese automotive manufacturers to promote installation of chargers for electric-powered vehicles (including EVs and plug-in hybrid vehicles). Under NCS management, the companies aim to provide a convenient charging network service letting drivers charge their vehicles anywhere with a single card.

In the United States, Nissan runs the "No Charge to Charge" program, which provides free access to selected charging stations for two years with the purchase or lease of a new Nissan LEAF. As of April 2018, the program is running in 55 areas where Nissan LEAF sales are high, including San Francisco, Los Angeles, Seattle and Portland, Oregon, and the company plans to expand to more areas in the future.

In Europe, Nissan is also working with companies in the energy industry and others to install quick chargers compliant with the CHAdeMO protocol. It is also collaborating with BMW to encourage the spread of EVs and PHEVs by boosting the number of quick-charging stations that can be used by vehicles from both companies. In the North America, as of Apr 2019, more than 400 stations had been built.

[3. Renault-Nissan Alliance EV fleet saves 18 tons of CO2 during COP21]

In 2015 COP21, also known as the 2015 Paris Climate Conference, was successfully held aiming to achieve a legally binding and universal agreement on climate, with the aim of keeping global warming below 2°C. In this major international event, the Renault-Nissan Alliance electric vehicle fleet cored 175,000 km without emitting any CO2 tailpipe emissions at COP21. The fleet of 200 electric vehicles, which shuttled delegates during the two-week United Nations annual climate change conference in Paris, saved nearly 200 barrels of oil or 18 tons of CO2 not emitted while driving. The fleet was the world's largest EV fleet ever provided to an international conference.

[4. The Yokosuka EV Creation Project]

On June 3, 2015, Nissan signed the Yokosuka EV Creation Project partnership agreement with the city of Yokosuka, Kanagawa Prefecture, targeting further adoption of EVs. The Oppama Plant in Yokosuka is designated as a major plant for EV production, promoting zero-emission mobility through comprehensive activities including establishment of charging infrastructure and encouraging the adoption of EVs, as well as vehicle production and sales. Meanwhile, Yokosuka has pioneered policies for creating EV demand, e.g. introducing subsidies, supporting instalment of charging stations and conducting a project based around the use of Nissan LEAFs as taxis. There are plans to develop partnership agreement activities further with the goal of boosting the proportion of EVs to 10% of all owned vehicles by fiscal 2020. Both Nissan and Yokosuka prioritize building charging infrastructure in housing complexes and employee parking lots to encourage a shift to EV use. Nissan will contribute to these activities by providing the necessary information and carrying out vehicle demonstrations.

## **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?**

Climate change is a material issue in our strategy and its policies need to be acknowledged and approved by the Board of Directors. Our global environmental management links various functional and regional engagements, and the biannual Global Environmental Management Committee (G-EMC) generally held every March and September determines overall priorities and the content of reports to be put before the Board of Directors.

Since this G-EMC serves as the body to share cross-functionally and cross-regionally the status of corporate-wide decisions and policies, it ensures that the climate-related activities of every division and region are consistent with the overall corporate's strategy. The Environmental Strategy Group makes sure that all engagements are consistent with both climate change strategy and mid-term business strategy.

At Nissan, our commitment to sustainability is a cornerstone of our business. It is also a driver of innovation. Numerous breakthroughs we have brought to the market - from the zero-emission Nissan LEAF to our cutting-edge Safety Shield technologies - have been inspired by our vision of a better world. As we develop the cars of the future, we are working to create products that not only strengthen our business but also enhance our society, increase mobility and help to solve today’s most significant safety and environmental challenges.

## **C12.4**

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

### **Publication**

In mainstream reports, incorporating the TCFD recommendations

### **Status**

Complete

### **Attach the document**

[Nissan\_Financial\_Report2019\_EN.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/KCMlBrxz10a4WMc4r1VavA/NissanFinancialReport2019EN.pdf)

### **Page/Section reference**

Page 19: (5) Risks associated with climate change Page 20: (6) Environmental and safety-related restrictions and Corporate Social Responsibility (CSR)

### **Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other, please specify (Result of scenario analysis)

### **Comment**

## **C15. Signoff**

## **C-FI**

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

Nissan continues to review and update the data to ensure the credibility of disclosure, and in the case of any disparity with previously disclosed data, we will make every effort to correct it to the latest value. Each environmental data used within the CDP survey represents the latest value at the time of submission.

## **C15.1**

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

|  |  |  |
| --- | --- | --- |
|  | **Job title** | **Corresponding job category** |
| Row 1 | Director and Executive Vice President | Director on board |