Welcome to your CDP Climate Change Questionnaire 2023

C0. Introduction

C0.1

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

Japan: 24 Group companies comprising NPHD (headquarters) and its consolidated subsidiaries, with a total of 3,612 employees
Asia: 126 consolidated subsidiaries with a total of 19,819 employees
Oceania: 85 consolidated subsidiaries with a total of 7,851 employees
Americas: 8 consolidated subsidiaries with a total of 2,430 employees

[Our Businesses] We are a comprehensive paint and coating manufacturer providing a broad range of products and services, including automotive coatings, decorative paints (for buildings, bridges, and other large structures), industrial coatings (for construction machinery, farming machinery, exterior building materials, office equipment, household electrical appliances, etc.), and paints for marine coatings, auto refinish, DIY, and roads, as well as surface treatments and systems for enhancing painting efficiency.

[Revenue by Region]
Japan: 186,062 million yen
Asia (excluding Japan): 708,515 million yen
Oceania: 314,902 million yen
Americas: 99,540 million yen

[Revenue by Business Segment]
Automotive Coatings: 163,837 million yen
Decorative Paints: 827,524 million yen
Industrial Coatings: 95,425 million yen
Fine Chemicals: 18,919 million yen
Other Paints: 68,247 million yen
Adjacencies Business: 135,067 million yen

Company Name: Nippon Paint Holdings Co., Ltd. (NPHD)
Founded: March 14, 1881
Capital: 671,432 million yen

Number of Employees: 51 (NPHD); 33,763 (Consolidated) (as of December 31, 2022)
Representatives:
Yuichiro Wakatsuki, Director, Representative Executive Officer & Co-President
Wee Siew Kim, Director, Representative Executive Officer & Co-President

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

January 1, 2022

End date

December 31, 2022

Indicate if you are providing emissions data for past reporting years

Yes

Select the number of past reporting years you will be providing Scope 1 emissions data for

3 years

Select the number of past reporting years you will be providing Scope 2 emissions data for

1 year

Select the number of past reporting years you will be providing Scope 3 emissions data for

2 years

C0.3

(C0.3) Select the countries/areas in which you operate.

Japan

C0.4

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

JPY

C0.5

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

Other, please specify
Financial management in Japan

C-CH0.7

(C-CH0.7) Which part of the chemicals value chain does your organization operate in?

Row 1

Bulk organic chemicals

Polymers

Bulk inorganic chemicals

Other chemicals

Specialty chemicals
Specialty organic chemicals

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	JP3749400002

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 or committee	Responsibilities for climate-related issues
President	・Our corporate governance policy states that we recognize the issues surrounding sustainability, including climate-related issues, as important management issues, and that we will examine the issues to be addressed for the growth of a sustainable society from a global perspective, and based on the results of such examination, we will promote measures in the areas of the environment, society, and governance. Goals related to the environment, society, and governance drafted by the President (Representative Executive Officers & Co-Presidents) will be proposed to and approved by the Board of Directors and set as the goals of Nippon Paint Group. ・In regard to sustainability, a priority issue that we must respond to as a business, five Global Teams have been formed based on the items of materiality, including climate-related issues, directly under the Directors, Representative Executive Officers & Co-Presidents, who have ultimate responsibility, and five business leaders are leading the initiatives on a global basis. In terms of sustainability governance, each leader reports directly to the Co-Presidents, who in turn report their progress and suggestions to the Board of Directors whenever necessary (usually four times a year), thus allowing the Board of Directors to oversee sustainability activities. Additionally, the Board of Directors receives reports around four times a year from the Audit Committee and other committees to oversee such activities. ・One example of our climate-related decisions made is that the Board of Directors decided on the Basic Policy on Sustainability, which was proposed by the President, in March 2023. The Basic Policy on Sustainability states that the Group will address environmental issues, including climate change, with the ultimate goal of achieving Maximization of Shareholder Value (MSV).

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Overseeing and guiding employee incentives Reviewing and guiding strategy	The Board of Directors oversees strategies, policies, and issues on climate-related and other environmental challenges, as well as relevant targets and progress, by receiving reports approximately four times a year from the Directors, Representative Executive Officers & Co-Presidents, who receive reports directly from the Global

	Overseeing the setting of corporate targets Monitoring progress towards corporate targets	Teams, and through the Audit Committee and other committees.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	They must have extensive experience in long-term corporate value creation from an ESG perspective, for example as the head of a consulting firm.

C1.2

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

Position or committee

President

Climate-related responsibilities of this position

Integrating climate-related issues into the strategy
Setting climate-related corporate targets
Monitoring progress against climate-related corporate targets

Coverage of responsibilities

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

・ As detailed below, the Directors, Representative Executive Officers & Co-Presidents of NPHD handle many responsibilities, including its responses to climate change.
・ Under its corporate governance structure, the Executive Officers make decisions on

the execution of business of NPHD that they have been delegated by resolution of the Board of Directors, and execute such business. On April 28, 2021, NPHD adopted a Co-President structure with the aim of further accelerating global business growth to pursue "Maximization of Shareholder Value (MSV)." Under the Co-President structure, NPHD has simplified the rules of authority and standardized them among domestic partner companies, and with regard to issues related to sustainability, including climate change, it has established a system that allows for flexible business execution through discussions with the necessary parties to resolve specific issues prior to the final decision-making by the Representative Executive Officers & Co-Presidents.

・ MSV is the sole mission of Nippon Paint Group. The concept of MSV is totally different from a "shareholder primacy" approach, in that we seek to create wealth with the aim of maximizing the remaining residual shareholder value after fulfilling our obligations to customers, employees, suppliers, society, and other stakeholders. MSV is predicated on first fulfilling our duties to these stakeholders. These obligations encompass legal contracts and social and ethical responsibilities as well as the concept of sustainability.

・ Under our internal control system, the Board of Directors delegates the authority to make decisions on business execution to the Representative Executive Officers & Co-Presidents, except for matters stipulated by laws, regulations, and the Articles of Incorporation; matters delegated by the General Meeting of Shareholders; and important strategic matters concerning the management of Nippon Paint Group. The main division of duties and areas of responsibility between the Representative Executive Officers & Co-Presidents are determined by the Board of Directors, and the detailed design and operation are left to the discretion of the Representative Executive Officers & Co-Presidents to ensure efficiency of execution. The Representative Executive Officers & Co-Presidents entrust the heads of the Partner Company Groups the authority to decide and execute their business and make them accountable for operation of their internal control systems, in order to allow them to concentrate on their own business management. The Board of Directors develops a medium-term management plan covering the entire Group, and the Representative Executive Officers & Co-Presidents closely communicate with the heads of the Partner Company Groups and report to the Board of Directors on the achievement of the goals of the plan and the use of the budget.

・ Our corporate governance policy states that we recognize the issues surrounding sustainability as important management issues, and that we will examine the issues to be addressed for the growth of a sustainable society from a global perspective, and, based on the results of such examination, we will promote measures in the areas of the environment, society, and governance. Goals related to the environment, society, and governance drafted by the Representative Executive Officers & Co-Presidents will be proposed to and approved by the Board of Directors and set as the goals of the Group.

・ In regard to sustainability, a priority issue that we must respond to as a business, five Global Teams have been formed based on the items of materiality, including climate change-related issues, directly under the Directors, Representative Executive Officers & Co-Presidents, who have ultimate responsibility, and five business leaders have been taking the initiative in carrying out sustainability initiatives on a global basis. In terms of

sustainability governance, each leader reports directly to the Co-Presidents, who in turn report their progress and suggestions to the Board of Directors whenever necessary (usually four times a year), thus allowing the Board of Directors to oversee sustainability activities.

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

President

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Company performance against a climate-related sustainability index (e.g., DJSI, CDP Climate Change score etc.)

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

・ Regarding the compensation of the Representative Executive Officers & Co-Presidents, after the performance of the previous year is comprehensively evaluated from financial and non-financial perspectives to determine the total compensation for the current fiscal year on a zero basis, the optimal mix of cash and equity compensation is determined each fiscal year. In the overall evaluation, in order to encourage appropriate and decisive risk-taking toward the realization of MSV, we did not use a formula based on the initial plan, but evaluated the Group management status toward the realization of MSV through the maximization of EPS and PER, on the precondition that the Group's sustainability is ensured, as evidenced by its corporate performance against a climate-related sustainability index, etc.

・ Specifically, after the total amount of compensation is determined based on a cross-sectional evaluation of such items as improvement of the profitability of domestic and overseas businesses, establishment of a stance in the stock market, group risk management, promotion of M&A, corporate culture reform, management structure reform, reinforcement of governance and internal control systems, including the Board of Directors, taking into consideration the results of benchmarking with other companies, the compensation level and composition in the home countries of the Representative Executive Officers & Co-Presidents, and the continuity with existing compensation, the optimal mix of cash and equity compensation is determined to ensure that the compensation level and composition are such that the Co-Presidents remain motivated and incentivized to achieve MSV.

・ The rationale behind the selection of performance indicators is that efforts to maintain and improve indicators, such as the CDP climate change score, have the effect of making us aware of matters requested by external parties, which in turn leads to improvements in our corporate activities, etc. As a result, our corporate performance can be maintained and improved, which in turn will lead to the Group management status achieving MSV by maximizing EPS and PER, which is the mission of the Representative Executive Officers & Co-Presidents, and will ultimately function as an incentive for the management team, including the Co-Presidents. Thus, we have selected corporate performance against a climate-related sustainability index, since it is also considered effective as a mechanism to generate a positive impact on future maintenance and improvement.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan.

・ The overall evaluation of the performance of the Representative Executive Officers & Co-Presidents from both financial and non-financial (sustainability, including climate change) perspectives will keep them motivated to achieve MSV.

・ Since efforts to maintain and improve indicators, such as the CDP climate change score, have the effect of making us aware of matters requested by external parties, which in turn strengthens the justification and necessity for the promotion of our climate transition plan, such efforts are used as references for decisions on management resource allocation to achieve our transition plan of net zero by 2050 and a 37% reduction in Scope 1 and 2 emissions by 2030 compared to FY 2019.

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	10	
Long-term	10	30	

C2.1b

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

[Definition of significant financial or strategic impact]
(1) Damage exceeding 3% of the amount of net assets on a consolidated basis within Nippon Paint Group's scope of reporting
(2) A 10% or greater change in consolidated net sales within Nippon Paint Group's scope of reporting from the start-of-year net sales forecast for the relevant fiscal year
(3) A 30% or greater change in consolidated ordinary profit within Nippon Paint Group's scope of reporting from the start-of-year ordinary profit forecast for the relevant fiscal year
[Explanation of quantitative indicators used in the definition of financial or strategic impact]
The Nippon Paint Group Risk Management Committee has been established (chaired by the Representative Executive Officers & Co-Presidents) to deliberate on the management of safety, climate change, environment, compliance, and other material risks for the Group, and the continuous review and improvement of the internal control system. By taking the frequency, impact, and seriousness of risks comprehensively into consideration, we classify significant financial/strategic impact that such risks might have on the Group's business under (1) through (3) above. This classification and the standards are subject to periodical review.

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

[Structure]
In regard to sustainability, a priority issue that we must respond to as a business, five Global Teams have been formed based on the items of materiality, including climate-related issues, directly under the Directors, Representative Executive Officers & Co-Presidents, who have ultimate responsibility, and five business leaders have been taking the initiative in carrying out sustainability initiatives on a global basis since 2022. We examined the identification and assessment of significant risks and opportunities under this structure by direct operations and value chain over time (on a short-, medium-, and long-term basis).
[Criteria for identification]
Regarding the identification of risks, based on the rationale, scope, business opportunities, and time frame, we determine the level of importance based on the following criteria: the area most directly related to our operations (raw material usage, energy and water consumption, and CO_2 emissions in the manufacturing process) and external factors (user needs during use and needs for product functions).
[Process for determining the significance of and response to identified risks and opportunities]
The Global Teams set targets and develop action plans for the identified climate-related risks, and report on and propose them to the Co-Presidents. At Group companies in Japan, it is considered whether to mitigate, transition, accept, and control the identified climate-related risks or invest in the opportunities, and at the Sustainability Council, a sub-organization of the Responsible Care Committee, business plans and other measures in line with the above targets and action plans are autonomously formulated to proceed with the response. Group companies in Japan report on their activities to the Global Teams for global risk assessments on a short-, medium-, and long-term basis several times a year. (Six meetings were held in 2022.)
The Global Teams report on their progress directly to the Co-Presidents, who in turn report on their progress and suggestions to the Board of Directors whenever necessary (usually four times a year), thus allowing the Board of Directors to oversee sustainability activities.

(*) Responsible Care: The global chemical industry’s voluntary initiative to implement and improve measures for environmental conservation, security and disaster prevention, industrial safety and health, safety for chemical substances and products, safety for logistics, and communication.

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	We always consider risks associated with current regulations in our risk assessments. One example of a risk type is an anti-global warming tax. In the manufacturing process, we need a large amount of energy: in the synthetic reaction process of resins and other high polymeric substances, we need heat exceeding 100°C, and in the process for dispersion stabilization of pigments and other raw materials, we need energy to cool chiller water. In Japan, an anti-global warming tax was introduced in 2012 in the form of a carbon tax, which levies a tax on fossil fuels according to CO_2 emissions. At that time, production costs increased significantly. Because the tax rate is 289 yen per ton of CO_2, which is far below that of other countries (from several thousand to over 10,000 yen), it is almost certain that the rate will be increased in stages in response to the Japanese government's goal of net zero by 2050. If this is the case, we are running the risk of production costs increasing as a result of the greater burden of fuel costs. Furthermore, the Act on Promotion of Global Warming Countermeasures (the "Anti-Global Warming Act") requires businesses to calculate, report, and announce their GHG emissions. As such, Nippon Paint Group calculates and reports its GHG emissions, sets its own reduction targets, and is working to achieve them. The Anti-Global Warming Act imposes administrative penalties of 200,000 yen or less in the event of failure to report the emissions amount or falsification of reports, and compliance with the Act incurs costs. There is a risk of compliance costs increasing should these obligations to report be tightened or implemented more strictly.
Emerging regulation	Relevant, always included	We consider risks associated with emerging regulations in our risk assessments. For example, an increasing number of countries around the world oblige businesses to disclose information on climate change via TCFD reporting and otherwise. There is a risk of incurrence of expenses for compliance should such disclosure be made mandatory in Japan. As of now, this type of disclosure in Japan is only being promoted through cooperation between the public and private sectors (TCFD Consortium). However, if disclosure on financial reports ("Annual Securities Reports" in the case of Japan) is made mandatory in the future, false statements will be subject to penalties. This being the case, an increase in associated compliance expenses for checking the accuracy of statements and preventing false statements can pose a risk for us.

		Fuel efficiency and CO_2 emission regulations are significantly important to automobile-related companies, which are our primary customers and account for the largest portion of our sales revenue, and new regulations may change the purchasing behavior of these customers. Specifically, as the weight of electrical components and other on-board parts increases in the realization of electrification of automobiles and automatic driving, etc., and the weight of the car body increases, it becomes necessary to reduce the weight of the car body in order to meet fuel efficiency requirements, and there is a possibility that changes in purchasing behavior, such as a shift to paints that match lighter materials such as more lightweight paints and resins, may affect our business performance and strategies. Due to such risk of an impact on our performance and strategies, we always include emerging regulations in our assessments.
Technology	Relevant, always included	As efforts to create a low-carbon society and reduce GHG emissions are being strengthened in all industries, if Nippon Paint Group is unable to respond to technological innovations or develop products that contribute to GHG reductions, demand for our existing products will decline, resulting in loss of business, loss of corporate value, and reduced sales revenue. Therefore, we include technology-related risks in our assessments. For example, water-based paints, which do not contain organic solvents, are healthier for workers and the surrounding environment, albeit requiring longer drying times. Since drying consumes a great deal of energy, it is desirable to develop coating methods and suitable paints that reduce baking energy during the coating process, for instance by shortening the drying time. There is also an urgent need to develop coating technologies that can handle the use of different materials than before (e.g., aluminum and resin instead of steel sheets) as automobiles become lighter. Furthermore, since there will be a risk of decline in our market share and profits due to non-paint materials being introduced into the market from other industries, such as films and material-borne resins, which do not require energy-intensive drying and baking processes, to mitigate this risk, it will be increasingly necessary to respond to technological developments such as adding new value to paints/coatings. Therefore, we include technology-related risks in our assessments.
Legal	Not relevant, included	Our main business is paint and coating production. Unlike automotive and electrical appliance manufacturers, which consume energy while their products are being used, we do not deal in products that directly contribute to climate change. Therefore, we rate our legal risk as small and consider it irrelevant. However, there is a risk of decline in our corporate value if our existing operational/administrative systems are found to be insufficient and are deemed to violate applicable laws after we change our operational

		systems by, for example, renovating or establishing plants in order to ensure compliance with revised laws/regulations in response to climate change. For this reason, we incorporate legal compliance in our business activities into our risk assessments. Pursuant to the Anti-Global Warming Act, we calculate and report GHG emissions periodically and monitor updates of relevant laws once a year.
Market	Relevant, always included	Market risks are highly relevant to our business, and thus we always include such risks in our risk assessments. Users of our products also view GHG emissions reduction as a major issue, and many of our customers, including automobile-related, housing-related, and shipbuilding and shipping-related companies, are asking us to use low-carbon technologies that help to reduce CO_2 emissions. Failure to respond to such requests could lower our products' competitive edge, and run the risk of market share loss. Regarding the risks associated with our products' competitive edge, we are constantly assessing them to make improvements. For example, the automotive industry is demanding shorter drying times in the automotive painting process, which requires a large amount of heat source and emits a large amount of CO_2. Meanwhile, powder paints are preferable in terms of VOC reduction, but may not be in terms of CO_2 reduction, as they have to be cured at a high temperature during the manufacturing process. Lowering the temperature is the key to technological development in this field. In the housing industry, demand for thermal barrier paints, which reflect sunlight to lessen the thermal impact on buildings, is rising. Maintaining thermal barrier functionality and diversifying the product lineup are the focus of differentiation in this field. Since there is no end to development competition, we need to incorporate market changes, such as an increase in sales of newly developed products and a decline in sales due to decreased demand for existing paints and coatings, into our risk assessments.
Reputation	Relevant, always included	Types of reputational risk include a decline in reputation among stakeholders due to reduced external evaluation. Failure to properly address climate change by, for example, reducing GHG emissions and developing/disseminating low-carbon technologies, and to disclose relevant policies and efforts could result in reduced external evaluation, as well as our customers, investors, and other stakeholders losing trust in us. This would pose the risk of our not being chosen by customers, investors or other stakeholders, and our shareholder value being damaged. Other risks include that of financing costs increasing as our reputation among investors declines due to delay in responding to climate change, and sales of our products decreasing as our reputation among stakeholders deteriorates overall.

		We monitor the external evaluation of our ESG initiatives, including responses to climate change, given by rating agencies, and report findings to the Global Teams as part of risks of climate change.
Acute physical	Relevant, always included	There is a risk of disruption to product supply if any of our plants are damaged, logistics are halted, or supply of materials is suspended due to the intensification of natural disasters resulting from climate change, such as floods and tornadoes. We consider such risk factors to be acute physical risks, and always include them in our risk assessments. Types of acute physical risk include the detrimental impact on local residents and the natural environment caused by outflow, leakage, etc. of chemical substances in paints, coatings, and raw materials due to extreme weather, especially heavy rain and typhoons. To prepare for these risk types, we have drawn up and implemented a business continuity plan (BCP) by using hazard maps for flooding and other natural disasters compiled by local governments, etc. to conduct simulations. We also conduct risk identification and assessment and report the results to the Board of Directors.
Chronic physical	Relevant, sometimes included	Since there is a possibility that we may be affected by chronic physical risks, we sometimes incorporate them into our risk assessments. Among such chronic physical risks are shortages of raw materials for fatty acids due to poor harvests of rapeseed, soybeans, etc., which are essential raw materials for paints and coatings. Other possible chronic physical risks include the shutting down of plants due to a rise in sea levels and an increase in air-conditioning and cooling costs as the air temperature rises. In addition, as the climate continues to slowly change, we expect the importance of testing the water and heat resistance of weather-resistant paint (paints and coatings resistant to outdoor weather and other external factors) to increase. For paints for outer walls of buildings, in particular, how they protect buildings from ultraviolet rays and rain is important, which means that we have to check to see that outer walls do not deteriorate when exposed to ultraviolet rays and rain for a long time. At present, weather-resistant paints and coatings are those that endure for two to three thousand hours in weather resistance tests. There may, however, be growing demand and need for paints and coatings that resist weather for even longer. There is also a risk of product development expenses increasing as the number of test items for deterioration tests, etc. increases. Also, our product sales may be affected by quality abnormalities that could occur during transportation due to insufficient storage/management systems at plants (those stored outdoors, in particular) and those occurring due to insufficient temperature management of raw materials, semi-finished, and finished products. As such, we consider these to be chronic physical risks in the framework of climate change-related risks.

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

Emerging regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Company-specific description

At present, anti-global warming tax costs 289 yen for every ton of GHG emissions in Japan. In 2022, our Scope 1 and 2 emissions were approximately 43,000 tons in Japan, which has already triggered an increase in manufacturing energy costs of approximately 12.4 million yen (43,000 t-CO_2 x 289 yen/t-CO_2 = 12.43 million yen) due to carbon price hikes. Given the recent rise in awareness of anti-climate change measures, this tax is likely to increase. Should this happen, the energy costs of our operations will further increase, and additional costs will be incurred for establishing new infrastructure and developing technology in order to achieve carbon-free operations, which in turn will push up the cost of our goods sold. According to the IEA, if the world achieves further decarbonization (the 2°C scenario is realized), some reports predict that carbon prices in developed countries, including Japan, will rise to approximately 15,600 yen/t-CO_2 by 2030. When we consider the possibility of our emissions increasing as our business continues to expand, the impact that carbon prices may have on our operational costs will become worryingly large. Even if we base our assumptions on the “business as usual” scenario (4°C scenario), where the current global decarbonization policies remain the same, the present level of expenses will continue to be incurred if we do not further reduce our Scope 1 and 2 emissions in Japan. Specifically, if the Japanese carbon price increases from 289 yen to 15,600 yen, and assuming that Scope 1 and 2 emissions of 43,000 t-CO_2 remain constant through 2030, the manufacturing energy costs associated with carbon prices would increase from 12.4 million yen to 671 million yen, which means

that the manufacturing energy costs would be expected to increase from 0.2% to 12.7% of our consolidated operating profit in Japan in 2022 of 5,296 million yen.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

12,400,000

Potential financial impact figure – maximum (currency)

670,000,000

Explanation of financial impact figure

The IEA estimates that even if the world does not achieve decarbonization consistent with the 2°C scenario, carbon prices will increase from the present values due to policies currently announced around the world. Using the carbon price under the 2°C scenario as the upper limit and the carbon price under the 4°C scenario as the lower limit, we calculated the potential financial impact assuming that Scope 1 and 2 emissions of 43,000 t-CO_2 in 2022 will remain constant through 2030. The IEA predicts that the carbon price will be JPY15,600/t-CO_2 (USD120/t-CO_2 × JPY130/USD = JPY15,600/t-CO_2) in developed countries in 2030 under the 2°C scenario. Under the 4°C scenario, the carbon price is assumed to remain at its present level (in Japan, the current anti-global warming tax will remain in place).

・ Breakdown of the calculation of the minimum impact: 43,000 t-CO_2 × JPY289/t-CO_2 = JPY12.4 million

・ Breakdown of the calculation of the maximum impact: 43,000 t-CO_2 × USD120/t-CO_2 x JPY130/USD = JPY670 million

・ For predicted carbon prices in developed countries in 2030, we referred to the IEA's "World Energy Outlook 2021" APS (Announced Pledges Scenario).

Cost of response to risk

282,000,000

Description of response and explanation of cost calculation

(Situation) While considering the impact of a carbon tax on ourselves, as a method of risk management, it is necessary to take measures to reduce emissions at our sites. Additionally, our primary customers are requesting us to achieve a drastic and thorough

reduction of CO_2 emissions in the manufacturing process.
(Task) As we aim to achieve net zero emissions for the entire Nippon Paint Group by 2050 or 2060, plans for reducing emissions in each scope are in place. For Scope 1 and 2, we will work on thorough energy conservation, conversion to fuels with low CO_2 emissions, and procurement of renewable energy, and for Scope 3, we will take measures to reduce supply chain emissions through engagement.
(Action) Internal initiatives to reduce CO_2 emissions include extensive energy conservation at existing facilities, conversion to fuels with low CO_2 emissions, and the introduction of renewable energy to domestic sites. With regard to existing facilities, we have made efforts to improve the energy efficiency of buildings and production processes. As for the use of renewable energy, since 2022, we have been procuring renewable energy by using non-fossil certificates, and plan to convert 62% of our Scope 2 emissions to renewable energy by 2030.
(Result)
・ As for the extensive energy conservation at existing facilities and the conversion to fuels with low CO_2 emissions, Nippon Paint Automotive Coatings' (NPAC's) Okayama Plant (automotive coatings), completed in February 2023, is promoting the introduction of state-of-the-art facilities that contribute to energy conservation and low-carbon emissions in the production process, and is expected to reduce energy consumption and CO_2 emissions during FY2023.
・ As for the introduction of renewable energy, we have been procuring renewable energy by using non-fossil certificates since 2022, and purchased certificates in FY2022 equivalent to approximately 7% of our Scope 2 domestic emissions in 2019, at a cost of approximately 3 million yen.
(Response)
・ During the period in question, as a measure to promote extensive energy conservation at existing facilities, we upgraded air conditioners, lighting equipment, and other equipment, resulting in improved energy efficiency in the buildings. The investment in these equipment upgrades amounted to 108 million yen and resulted in a reduction of 118 t-CO_2.
・ Replacing machinery and equipment improved energy efficiency in the production process, leading to a reduction of 500 t-CO_2, with the cost of these capital investments being 144 million yen.
・ As for the introduction of renewable energy by using non-fossil certificates, we have been purchasing non-fossil certificates since 2022, and purchased certificates in FY2022 equivalent to approximately 7% of our Scope 2 domestic emissions in 2019, at a cost of approximately 3 million yen, resulting in a reduction of 2,009 t-CO_2. Furthermore, we plan to gradually increase our ratio of renewable energy to 62.1% by 2030, and the cost of non-fossil certificates in 2030 is expected to be 30 million yen.

・ Therefore, the cost of response was recorded as 108 million yen + 144 million yen + 30 million yen = 282 million yen.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Acute physical
Flood (coastal, fluvial, pluvial, groundwater)

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

If an increase in the severity and frequency of extreme weather-related events were to occur, damage to our facilities and suppliers' facilities leading to suspension of production poses the risk of reduced revenue. Especially for plants located near rivers and coasts, there is a risk of flooding, high tides, and tsunamis. In Japan, cases of water levels crossing dangerous flood thresholds have occurred frequently in recent years, with the Ministry of Land, Infrastructure, Transport and Tourism reporting approximately 470 cases in 2018, a more-than-five-fold increase over the past four years. For this reason, for both ourselves and suppliers with plants located near coasts and rivers, the possibility of being affected by flooding, inundation, and high tides will be likely to increase in the future. If we were to sustain damage, the resulting impact (loss) would be substantial, which is why this risk is acknowledged throughout the company and it is essential that we consider impact assessment and response measures.
For example, resins account for 50% and pigments account for 20% of the raw materials for our product, paint. Our Tochigi Plant manufactures products using resins and pigments, which it also purchases from a supplier located along the Arakawa River. According to expert analysis, in the worst case scenario, Typhoon No. 19 in 2019 could have caused the Arakawa River to burst its banks. The frequency and severity of record-breaking rainstorms increase every year, and if suppliers' plants were to be flooded or submerged due to the bursting of riverbanks, we would not be able to receive raw materials, which could affect our manufacturing and/or shut down our operations, having an impact on our customers, which could affect our revenues due to business losses.

We continuously asked our customers when necessary to increase inventory levels prior to FY2021, and continued to do so in FY2022. Specifically, we have asked our distributors and customers to increase their inventory to prepare for flooding. This minimizes the impact on customers in the unlikely event of a flood that affects our plants or those of our suppliers, resulting in the suspension of shipments. Switching to other suppliers to procure raw materials is expected to result in raw material shortages, price hikes, and additional costs for finding new suppliers. If we assume that 10% of the current procurement amount of raw materials for such paint is equivalent to the price

hikes and increased procurement costs, the amount would be 1,170 million yen, which is equivalent to 2.2% of our consolidated operating profit of 5,296 million yen in Japan Group in 2022, thus having an impact.

Time horizon

Medium-term

Likelihood

Unlikely

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)

117,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

A plant processing the primary raw materials for paint is located along the Arakawa River, and according to expert analysis, in the worst case scenario, Typhoon No. 19 in 2019 could have caused the Arakawa River to burst its banks. The frequency and severity of record-breaking rainstorms increase every year, and if suppliers' plants were to be flooded or submerged due to bursting of riverbanks, we would not be able to receive raw materials, which could suspend manufacturing operations and have an impact on our customers, which could affect our revenues due to business losses.

The period that would affect our manufacturing was assumed to be one month, based on the total number of days lost due to disrupted activities at business establishments or business stagnation in the Manual for Economic Evaluation of Flood Control Investment published by the Ministry of Land, Infrastructure, Transport and Tourism, and the amount of potential impact was calculated by dividing the current annual procurement amount of raw materials for the paint in question by 12, assuming a one-month suspension: 1.4 billion yen / 12 months × 1 month = 117 million yen.

Cost of response to risk

840,000,000

Description of response and explanation of cost calculation

(Situation) We recognize the Arakawa River and other rivers as watersheds for our sites that could have a significant financial and strategic impact on our business. Sites

located near these rivers or in coastal areas are expected to suffer impacts such as the suspension or delay of product shipments in the event of flooding.
(Task) It is essential that we take actions to minimize the impact of flood risks through engagement.
(Action) We continuously asked our customers when necessary to increase their inventory levels prior to FY2021, and continued to do so in FY2021. Specifically, we have asked our distributors and customers to increase their inventory to prepare for flooding. This minimizes the impact on customers in the unlikely event of a flood that affects our plants or those of our suppliers, resulting in the suspension of shipments. Switching to other suppliers located outside the Arakawa River basin that are not affected by the flooding to procure raw materials is expected to result in raw material shortages, price hikes, and additional costs for finding new suppliers. The calculation is based on the assumption that 10% of the current procurement amount of raw materials for the paint in question is equivalent to the price hikes and increased procurement costs.
(Result) We continuously asked our customers when necessary to increase their inventory levels prior to FY2021, and continued to do so in FY2022. Specifically, we have asked our distributors and customers to increase their inventory to prepare for flooding. This minimizes the impact on customers in the unlikely event of a flood that affects our plants or those of our suppliers, resulting in the suspension of shipments. Switching to other suppliers to procure raw materials is expected to result in raw material shortages, price hikes, and additional costs for finding new suppliers. The calculation is based on the assumption that 10% of the current procurement amount of raw materials for the paint in question is equivalent to the price hikes and increased procurement costs.
(Response)
Breakdown of cost of response: Increase in raw material costs due to emergency response by suppliers: 835 million yen + Personnel costs for coordinating with dealers and customers to increase product inventories, etc.: 5 million yen = 840 million yen
This amount is equivalent to 15.8% of our domestic consolidated operating profit of 5,296 million yen in 2022, and thus has an impact.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Market
Changing customer behavior

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

With the shift to a decarbonized society progressing in recent years, there has been a noticeable change in the behavior and awareness of our customers, and we believe that it is necessary to understand the business impact of this change on us. In particular, we believe that our customers, who are mainly in the automotive, construction, and other sectors with high emissions, will increasingly implement policies and business strategies related to decarbonization in the future. In fact, these sectors with high emissions are our main customers in terms of sales. In the midst of this trend, we believe that we face the risk of losing business opportunities if we are unable to meet the demands of our customers, and it is very important for us to estimate the extent of the impact of this risk. We have already received dozens of requests from our customers to respond to climate change, including CDP responses. If we are unable to respond to these requests, we may lose business opportunities, resulting in an enormous impact on our sales.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

18,606,200,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

According to the TCFD Chemical Sector Guidance, one of the most important business risks to many companies in the chemical industry is a decrease in demand (i.e., loss of business opportunities) due to changes in customer behavior, and we recognize that this is a common risk across the industry. The calculation is based on the assumption that our sales of 186,062 million yen in 2022 could possibly decrease by 10%.
186,062 million yen x 10% = 18,606 million yen

Cost of response to risk

7,301,000,000

Description of response and explanation of cost calculation

(Task) As our customers increasingly demand that we address climate change-related issues, there is growing demand for the development of products that contribute to decarbonization. We believe that we will be able to prevent the loss of business opportunities by firmly responding to these climate change-related needs, including the need for decarbonized products. We have started various internal initiatives, such as calculating supply chain emissions, introducing renewable energy, and developing products with low environmental impact (eco-friendly products). (Action) For example, we define “eco-friendly products” as those with the following features, and we are focusing on research and development of these products to meet customer needs. The calculation is based on the assumption that 100% of the 7,301 million yen in research and development expenses within the scope of reporting in 2021 would be applicable.

(1) Products that can substantially extend the life of coating films and coated objects and reduce waste generation to contribute to the effective use of resources in comparison with general products
(2) Products that can greatly improve energy efficiency at the time of using coated objects based on the functions of coating films in comparison with the use of general products to mitigate the impact on climate change
(3) Products that can greatly lower the energy consumption for coating and surface treatment processes in comparison with general products and thereby mitigate the impact on climate change
(4) Products that substantially reduce the release of chemical substances into the environment in the coating and surface treatment processes in comparison with general products, thereby minimizing environmental destruction and health hazards to painters
(5) Products that greatly improve the efficiency of resource use in comparison with general products and allow the application of environmentally friendly technology and industrial processes

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?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

While global warming is a concern for society as a whole, including our primary customers, and entails physical and regulatory risks, we recognize that strategic responses to this issue can be linked to business expansion opportunities. Eco-friendly products that we have defined include products that can significantly improve energy efficiency in the use of coated materials and reduce the impact of climate change compared to the use of standard products due to the function of paint/coating films; one of these products is fuel-efficient ship-bottom paints. LF-Sea and A-LF-Sea, which are currently on the market, can improve fuel efficiency by 4 to 10% by reducing the frictional resistance of the vessels to which they are applied. In addition to fuel efficiency improvement, we developed a new product, FASTAR, with low elution and low VOC performance, which was introduced in 2021. As there is expected to be a growing trend in the shipping business toward environmental impact regulation, including CO_2 emissions reduction, in the future, we aim to expand sales of products that improve the fuel efficiency of vessels. In estimating the financial impact, we assumed that 10% of the revenue from products for the shipping sector 54,485 million yen (the figure for other paints in Japan Group in the Annual Securities Report) would be applicable. Although the revenue from other paints includes “other coatings” business other than marine coatings and overseas business of marine coatings, we decided to use this figure because the details are confidential.

Time horizon

Medium-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)

2,724,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The International Maritime Organization (IMO) has developed a roadmap for reducing CO_2 emissions from the shipping sector. According to the roadmap, the targets are to reduce CO_2 emissions from international shipping by 50% from the 2008 levels by 2050, and by 40% from the 2008 levels by 2030. The 2030 reduction target is expected to be achieved through two initiatives: reduction by energy-saving technologies and reduction by operational efficiency. The energy-saving technologies associated with our fuel-efficient ship-bottom paints will be effective, and we expect sales to increase further.
In this way, as not only customers in the shipping sector but also those in other sectors increasingly demand that we address climate change-related issues, there is growing demand for the development of products that contribute to decarbonization. We believe that we will be able to gain business opportunities by firmly responding to these climate change-related needs, including the need for decarbonized products. We have started various internal initiatives, such as calculating supply chain emissions, introducing renewable energy, and developing products with low environmental impact (eco-friendly products).

[Explanation of financial impact figure]
The revenue from “other paints” including marine coatings was 54,485 million yen in 2022. Assuming a 5% increase in planned revenue to 57,209 million yen in 2023, we recorded the difference, 2,724 million yen, as the impact. (Based on the Medium-Term Plan, which aims to increase the revenue from Japan Group by 5% in 2023 compared to 2022)
Although the revenue from other paints includes “other coatings” business other than marine coatings and overseas business of marine coatings, we decided to use this figure because the details are confidential.
54,485 million yen x 5% = 2,724 million yen

Cost to realize opportunity

2,524,000,000

Strategy to realize opportunity and explanation of cost calculation

・ We have set KPIs for eco-friendly products including fuel-efficient ship-bottom paints, with the aim of expanding sales.
(Situation) Shipping companies have been concerned about soaring fuel costs due to the need to reduce CO_2 and SOx emissions, which cause global warming, the rise in heavy oil prices from the second half of 2005, and the request to switch from C fuel oil to A fuel oil with low sulfur content to comply with stricter SOx emission regulations. Under these circumstances, the Ministry of Land, Infrastructure, Transport and Tourism issued a guideline for reducing CO_2 from international shipping, and we began the development of fuel-efficient anti-fouling paints.
(Task) LF-Sea was confirmed to reduce fuel consumption by 4%, and we received

requests to further reduce fuel consumption from customers. In addition, the project to develop A-LF-Sea was adopted by the Ministry of Land, Infrastructure, Transport and Tourism for its “Project to Support the Development of Technology to Reduce CO_2 Emissions from Ships.” These factors prompted us to develop A-LF-Sea. We introduced LF-Sea as a viscous and smooth biomimetic product inspired by the surfaces of a marine organism (tuna), which are covered with a mucous membrane, and the technical challenge was to find a method to further produce effective smoothness.
(Action) The development of A-LF-Sea, an improved version of LF-Sea, was conducted as a joint national project of three companies, Nippon Paint Co., Ltd. (currently Nippon Paint Holdings Co., Ltd.), Nippon Paint Marine Coatings Co., Ltd., and Mitsui O.S.K. Lines, Ltd., sponsored by the Ministry of Land, Infrastructure, Transport and Tourism under ClassNK’s joint research theme of “Research and Development of Greenhouse Gas Reduction Technologies in International Shipping.” Our development efforts to expand the FASTAR product lineup have been continuing since 2021, and it is planned to introduce products between 2023 and 2024.
(Result) As a result, a 10% reduction in fuel consumption was confirmed through the combination of the hydrogel technology of LF-Sea, which was further improved to reduce frictional resistance, and the viscosity control technology for the base coat. Since the introduction of LF-Sea in 2008, LF-Sea and A-LF-Sea have been adopted in more than 4,400 vessels as of May 2023. FASTAR has been adopted in more than 550 vessels (350 of which have adopted the fuel-efficient model) since its introduction in 2021.

(Breakdown of cost of response)
(A) R&D expenses 2,139 million yen + (B) Capital expenditures 385 million yen = 2,524 million yen
(A) R&D expenses
・ As the cost of realizing the opportunities, we estimated and recorded the R&D expenses of the operating company that develops and markets the products in question. We calculated the R&D expenses by multiplying the 7,301 million yen in R&D expenses in 2022 for NPHD as a whole in Japan (the figure in the Annual Securities Report) by the ratio of the sales of the operating company in question to our total sales in Japan, 29.3%.
Calculation equation: 7,301 million yen x 29.3% = 2,139 million yen
We calculated the ratio of the sales of the operating company in question to our total sales in Japan, 29.3%, by dividing the revenue from 54,485 million yen of “other paints” in Japan Group in 2022 as stated in the Annual Securities Report by the total revenue of 186,062 million yen in Japan Group as a whole. Although the revenue from other paints includes “other coatings” business other than marine coatings and overseas business of marine coatings, we decided to use this figure because the details are confidential.

Capital expenditures (B)
・ We expect capital expenditures for 2023 to be 55 billion yen on a consolidated basis. We intend to continue to make capital investments to upgrade eco-friendly products.
55 billion yen x 14% (ratio of revenue in Japan to consolidated revenue) x 5% (ratio of

revenue from “other paints” including marine coatings in Japan Group) = 385 million yen

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

While global warming is a concern for society as a whole, including our primary customers, and entails physical and regulatory risks, we recognize that strategic responses to this issue can be linked to business expansion opportunities. Eco-friendly products that we have defined include products that can greatly improve energy efficiency at the time of using coated objects based on the functions of coating films in comparison with the use of general products to mitigate the impact on climate change. One of these products is a paint/coating system that can dry at lower temperatures and in shorter time, thereby reducing the environmental impact of the automotive painting process. The 3-wet painting system can reduce CO_2 emissions during the painting process. Our primary customers have identified CO_2 emissions reduction at automobile manufacturing plants as a long-term strategy, and sales of products that help reduce CO_2 emissions are expected to increase in the future. In FY2022, domestic sales in this segment totaled 35,089 million yen, and we recognize that sales of eco-friendly products accounted for approximately 10%, or 3,509 million yen.

Time horizon

Medium-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)

3,508,900,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Efforts toward decarbonization are expanding in the automobile industry. More and more of our primary customers are actively communicating their climate change countermeasures externally, and we believe that our eco-friendly automotive coatings can meet the decarbonization needs of these customers. Additionally, from a long-term perspective taking into account global trends, the growth rate of new vehicle sales is expected to expand at an annual rate of 2% until 2030, despite a drop in the growth rate compared to the past due to car sharing and other factors, and the production of new vehicles is expected to continue on an upward trend. (McKinsey : Automotive revolution–perspective towards 2030)
In this way, as not only customers in the automotive sector but also those in other sectors increasingly demand that we address climate change-related issues, there is growing demand for the development of products that contribute to decarbonization. We believe that we will be able to gain business opportunities by firmly responding to these climate change-related needs, including the need for decarbonized products. We have started various internal initiatives, such as calculating supply chain emissions, introducing renewable energy, and developing products with low environmental impact (eco-friendly products).
In estimating the financial impact, we assumed that 10% of the revenue from products for the automotive sector of 35,089 million yen (the figure for automotive coatings in Japan Group in the Annual Securities Report) would be applicable.
35,089 million yen x 10% = 3,509 million yen

We expect the revenue from eco-friendly products to increase approximately three-fold by 2025, compared to the projection for 2023.

Cost to realize opportunity

1,380,000,000

Strategy to realize opportunity and explanation of cost calculation

(Situation) In recent years, our primary customers have accelerated their efforts to become carbon neutral and reduce CO_2 emissions throughout the life cycle of automobiles, and tend to launch such environment-specific initiatives and plans. Since coating is a process with high CO_2 emissions during the automobile manufacturing stage, demand for CO_2 emissions reduction during the coating process is increasing yearly.
(Task) Since paints and electrodeposition paints used in the automobile manufacturing process consume a lot of energy due to their high baking temperatures, paints that can be applied in a shorter time than conventional paints are growing in demand.

(Action) The wet-on-wet coating system, which we have been developing continuously since before FY2022, shortens the baking process of the middle coating layer, thereby reducing CO_2 emissions during the entire coating process. In FY2022, we continued the development of low-temperature baking type, high-solid type, and other types of paints.
(Result)
・ As the cost of realizing the opportunities, we estimated and recorded the R&D expenses of the operating company that develops and markets the products in question. We calculated the R&D expenses by multiplying the 7,301 million yen in R&D expenses in 2022 for Japan Group of Nippon Paint Group (the figure in the Annual Securities Report) by the ratio of the sales of the operating company in question to our total sales in Japan, 18.9%. Calculation equation: 7,301 million yen x 18.9% = 1,380 million yen We calculated the ratio of the sales of the operating company in question to our total sales in Japan, 18.9%, by dividing the revenue of 35,089 million yen of automotive coatings in Japan Group in 2022 as stated in the Annual Securities Report by the total revenue of 186,062 million yen in Japan Group as a whole.

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
While global warming is a concern for society as a whole, including our primary customers, and entails physical and regulatory risks, we recognize that strategic responses to this issue can be linked to business expansion opportunities. Eco-friendly products that we have defined include the Attsu-9 Road (R), a thermal barrier pavement paint. It reflects solar heat irradiating on asphalt and suppresses the rise in road surface temperature. Applying the Attsu-9 Road (R) to road surfaces reflects infrared rays of solar energy and suppresses the rise in road surface temperature, thereby reducing the rise in temperature in urban areas (heat island effect) and contributing to saving energy used for cooling and other purposes in urban areas. Applying the Attsu-9 Road (R) to road surfaces is expected to suppress the rise in road surface temperature by 11 to 14°C (assuming summer daytime conditions). In estimating the financial impact, we

assumed that the revenue from industrial coatings in 2022 is 40,027 million yen (the figure for other paints in Japan Group in the Annual Securities Report), and we recognize that its scale and impact is significant.

Time horizon

Medium-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)

750,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

In Japan, it has been confirmed that the heat island effect caused by the recent global warming has led to a significant rise in temperature in urban areas. It was reported that the temperature rise in August in Tokyo over the 100 years since 1901, when the government started collecting temperature statistics, was +2.4°C. As a countermeasure to the heat island effect in large cities, including Tokyo, the Japanese government has formulated a guideline for urban development of mitigating the heat island phenomenon, which serves as a guideline for municipalities to create a plan for low-carbon cities based on the Act Concerning the Promotion of Low-Carbon Cities. The guideline lists three major causes of the heat island effect, one of which is artificial ground surface covers, which means that heat stored in asphalt, concrete, and other pavement surfaces causes temperatures to rise in urban areas. The guideline states that highly reflective pavement is an effective countermeasure to this problem, and also mentions the CO_2 emissions reduction associated with the suppression of the heat island effect. Therefore, we believe that sales of Attsu-9 Road (R), which realizes highly reflective pavement, are expected to expand not only to local governments but also to companies that support the product as a means of reducing environmental impact. We calculated the potential impact by multiplying the current sales of the Attsu-9 Road (R) of approximately 100 million yen by the expected growth rate of the road pavement coating market of 7.5 times in 10 years by 2030.

Cost to realize opportunity

1,570,000,000

Strategy to realize opportunity and explanation of cost calculation

We have set KPIs for eco-friendly products including thermal barrier road surface paints, with the aim of expanding sales.
(Situation) Since around 2006, we have been developing applications for thermal barrier paints for roofs in the company-wide Thermal Barrier Project. To expand applications of the paints for roofs to roads, we needed to improve the adhesion to asphalt and the durability of the paint film under the load of vehicles while maintaining the thermal barrier performance. The Tokyo Metropolitan Government aimed at a 10°C decrease in road surface temperature in summer as a heat island countermeasure.
(Task) Since around 2009, the Tokyo Metropolitan Government has been using Methyl Methacrylate (MMA)-based paints for thermal barrier pavement for roads as an urban heat island countermeasure; however, around 2014, problems with peeling of the coating film (our urethane urea-based products do not peel) have become apparent. In addition, MMA-based paints have a strong odor, which also became a problem.
(Action) In contrast, Attsu-9 Road (R), a urethane urea-based paint that we have developed, is slip-resistant, abrasion-resistant and odorless, has low VOC, and can suppress peeling.
(Result) A survey by the Tokyo Metropolitan Government revealed that our urea-based paints rarely peeled off. To solve the peeling problem, the Tokyo Metropolitan Government revised its performance requirements to mainly urethane urea-based materials (same as our Attsu-9 Road (R)), which accelerated the introduction of Attsu-9 Road (R), gaining an overwhelming share of the market. The revenue from the relevant paint in 2022 did not reach our forecast due to the impact of the COVID-19 pandemic, which has continued since 2019. However, we expect sales of this paint, which can contribute to curbing global warming, to increase, taking the downgrading of COVID-19 from Category 2 to Category 5 in 2023 as an opportunity.

As the cost of realizing the opportunities, we estimated and recorded the R&D expenses of the operating company that develops and markets the product in question. We calculated the R&D expenses by multiplying the 7,301 million yen in R&D expenses in 2022 for Japan Group of Nippon Paint Group (the figure in the Annual Securities Report) by the ratio of the sales of the operating company in question to our total sales in Japan, 21.5%.
Calculation equation: 7,301 million yen x 21.5% = 1,570 million yen

We calculated the ratio of the sales of the operating company in question to our total sales in Japan, 21.5%, by dividing the revenue of 40,027 million yen of industrial coatings in Japan Group in 2022 as stated in the Annual Securities Report by the total revenue of 186,062 million yen in Japan Group as a whole.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan

Yes, we have a climate transition plan that aligns with a 1.5°C world.

Publicly available climate transition plan

Yes

Mechanism by which feedback is collected from shareholders on your climate transition plan

We have a different feedback mechanism in place

Description of feedback mechanism

In issuing the integrated report, we hold interviews with several shareholders and obtain feedback directly from them.

Frequency of feedback collection

More frequently than annually

Attach any relevant documents which detail your climate transition plan (optional)

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate	Company-wide		・ In risk assessment, especially in estimating the impact of carbon pricing, we conduct scenario analysis based on the 1.5°C scenario (NZE2050) and

scenarios RCP 8.5			the 4°C scenario (RCP8.5) in accordance with the IPCC Representative Concentration Pathways (RCPs). ・ We target 2050 as our net-zero target year and by around 2030 as our intermediate target year.
Transition scenarios IEA NZE 2050	Company-wide		・ In risk assessment, especially in estimating the impact of carbon pricing, we conduct scenario analysis based on the 1.5°C scenario (NZE2050) and the 4°C scenario (RCP8.5) in accordance with the IPCC Representative Concentration Pathways (RCPs). ・ We target 2050 as our net-zero target year and by around 2030 as our intermediate target year.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

・ Increase in carbon tax and other costs due to carbon pricing

Results of the climate-related scenario analysis with respect to the focal questions

[Financial impact figure]

The IEA estimates that even if the world does not achieve decarbonization consistent with the 2°C scenario, carbon prices will increase from the present values due to policies currently announced around the world. Using the carbon price under the 2°C scenario as the upper limit and the carbon price under the 4°C scenario as the lower limit, we calculated the potential financial impact assuming that Scope 1 and 2 emissions of 43,000 t-CO_2 in 2022 will remain constant through 2030. The IEA predicts that the carbon price will be JPY15,600/t-CO_2 (USD120/t-CO_2 × JPY130/USD = JPY15,600/t-CO_2) in developed countries in 2030 under the 2°C scenario. Under the 4°C scenario, the carbon price is assumed to remain at its present level (in Japan, the current anti-global warming tax will remain in place).

・ Breakdown of the calculation of the minimum impact: 43,000 t-CO_2 × JPY289/t-CO_2 = JPY12.4 million

・ Breakdown of the calculation of the maximum impact: 43,000 t-CO_2 × USD120/t-CO_2 x JPY130/USD = JPY670 million

・ For predicted carbon prices in developed countries in 2030, we referred to the IEA's "World Energy Outlook 2021" APS (Announced Pledges Scenario).

[Cost of response]
(Situation) While considering the impact of a carbon tax on ourselves, as a method of risk management, it is necessary to take measures to reduce emissions at our sites. Additionally, our primary customers are requesting us to achieve a drastic and thorough reduction of CO_2 emissions in the manufacturing process.
(Task) As we aim to achieve net zero emissions for the entire Nippon Paint Group by 2050 or 2060, plans for reducing emissions in each scope are in place. For Scope 1 and 2, we will work on thorough energy conservation, conversion to fuels with low CO_2 emissions, and procurement of renewable energy, and for Scope 3, we will take measures to reduce supply chain emissions through engagement.
(Action) Internal initiatives to reduce CO_2 emissions include extensive energy conservation at existing facilities, conversion to fuels with low CO_2 emissions, and the introduction of renewable energy to domestic sites. With regard to existing facilities, we have made efforts to improve the energy efficiency of buildings and production processes. As for the use of renewable energy, since 2022, we have been procuring renewable energy by using non-fossil certificates, and plan to convert 62% of our Scope 2 emissions to renewable energy by 2030.
(Result)
・ As for the extensive energy conservation at existing facilities and the conversion to fuels with low CO_2 emissions, NPAC's Okayama Plant (automotive coatings), completed in February 2023, is promoting the introduction of state-of-the-art facilities that contribute to energy conservation and low-carbon emissions in the production process, and is expected to reduce energy consumption and CO_2 emissions during FY2023.
・ As for the introduction of renewable energy, we have been procuring renewable energy by using non-fossil certificates since 2022, and purchased certificates in FY2022 equivalent to approximately 7% of our Scope 2 domestic emissions in 2019, at a cost of approximately 3 million yen.
(Response)
・ During the period in question, as a measure to promote extensive energy conservation at existing facilities, we upgraded air conditioners, lighting equipment, and other equipment, resulting in improved energy efficiency in the buildings. The investment in these equipment upgrades amounted to 108 million yen and resulted in a reduction of 118 t-CO_2.
・ Replacing machinery and equipment improved energy efficiency in the production process, leading to a reduction of 500 t-CO_2, with the cost of these capital investments being 144 million yen.
・ As for the introduction of renewable energy by using non-fossil certificates, we have been purchasing non-fossil certificates since 2022, and purchased certificates in FY2022 equivalent to approximately 7% of our Scope 2 domestic emissions in 2019, at a cost of approximately 3 million yen, resulting in a reduction of 2,009 t-CO_2. Furthermore, we plan to gradually increase our ratio of renewable energy to 62.1% by 2030, and the cost of non-fossil certificates in 2030 is expected to be 30 million yen.

・ Therefore, the cost of response was recorded as 108 million yen + 144 million yen +

30 million yen = 282 million yen.

C3.3

(C3.3) 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	Evidence of impact: Regarding the decorative paints business, the market is expected to grow by 0.7% per annum between 2019 and 2024 according to data from the World Coating Council. In the architectural and steel structure area, paints for new construction are expected to see negative growth, while demand for paints for repainting is expected to remain stable. Regarding the automotive coatings business, the market is expected to grow by 3.1% per annum from 2019 to 2024 according to data from the World Coating Council, and business opportunities are expected to increase due to major changes in the automotive industry. Customers in the automotive and other industries have begun to select low-carbon products for parts and materials procurement since the early 2000s. Since both the construction and automotive industries recognize climate change as an important issue, if they considered us to be a company that did not value climate change action, we would not be chosen by our customers as a supplier, posing the risk of our losing business in the medium and long term. Effect of impact: We have reviewed our capital investment plan to ensure that our products can contribute to addressing climate change, especially in terms of the low carbonization of our manufacturing processes, for customers who are becoming increasingly concerned about climate change action and are committed to low carbonizing their entire value chains. Timeline: 3 to 5 years Case study: (Situation) Customers in the automotive and other industries that are pushing for decarbonization of their value chains, from product development to production and sales, have begun to select raw materials and parts/components with low

		GHG emissions (low-carbon products). (Task) To promote the decarbonization of our products while enhancing our competitive edge and productivity, we have reviewed the basic policy for capital investment and redefined the system and targets in this regard in the new Medium-Term Plan (FY2021 - 2023) in order to maintain business opportunities over the medium-to-long term. (Action) The new Medium-Term Plan specifies that we will secure funds for investment in the renewal of existing facilities for the purpose of maintaining and upgrading facilities and replacing aging facilities, as well as for the establishment of new sites, expansion of production capacity, and development of distribution networks. (Response) Specifically, we have secured 40 billion yen for investment in the renewal of existing facilities and 65 billion yen for the establishment of new sites, expansion of production capacity, and development of distribution networks over the next three years. Of this amount, we secured 5.8 billion yen in 2021 as capital investment for Japan Group. This includes the construction of a new Okayama Plant for automotive coatings. We also plan to introduce state-of-the-art facilities to respond to energy conservation and low-carbonization in the production process, which is expected to significantly reduce CO_2 emissions per product. The specific amount of CO_2 emissions reduction expected is currently being evaluated. We report the CO_2 emissions of our products during production to our primary customers every year through the CDP, and we also expect to start to report the amount of reduction in 2023, allowing us to demonstrate the low-carbon nature of our products. Furthermore, as for existing facilities, efforts are under way to improve production sites and reorganize the supply chain. We plan to establish a new plant in Okayama Prefecture and a color toning plant for decorative paints in Kanagawa Prefecture. These plants will both be smart factories with advanced automation technologies, and are expected to achieve energy consumption reduction.
Supply chain and/or value chain	Yes	Evidence of impact: We manufacture and sell paints produced using large quantities of petrochemical products. Due to this nature of our business, in view of the fact that the petrochemical industry is a large emitter of greenhouse gases, we recognize that the impact of CO_2 emissions from purchased raw materials themselves and processing in the value chain has a significant impact on climate change. Effect of impact: Companies in the automotive, construction,

		and shipping industries, which are our core customers, are rushing to respond to climate change, and if they consider us to be a company that does not value climate change action, we will not be chosen by our customers as a supplier, posing the risk of our losing business in the medium and long term. Timeline: 0 to 3 years (short term / medium term) Case study: (Situation) Our customers' needs include improvements in fuel efficiency in automobiles and ships, improvements in energy efficiency in homes, and energy conservation in the painting process. Nippon Paint Group has already introduced eco-friendly products on the market; however, they have yet to gain broad recognition among end-users through promotions at retailers. (Task) To increase sales and market share, it is important to raise awareness of our products that contribute to tackling climate change throughout the value chain. (Action) We will review PR and advertising strategies for the products we have already put on the market, such as increasing opportunities to promote the benefits of reducing CO_2 emissions. Examples include automotive coatings (Aqurex: low-carbon baking process such as 3-wet painting), automotive refinish paints (nax Series: drying process reduction, drying performance improvement), industrial paints (Attsu-9, etc.: thermal barrier pavement), decorative paints (Thermo Eye: roof thermal barrier paint), and marine paints (A-LF-Sea, etc.: fuel-efficient ship-bottom paints). (Response) To increase awareness of our products that can contribute to reducing CO_2 emissions among our customers and end-users, we increased product exposure through the following: receiving external awards, registering our products as externally certified products, and releasing introductory videos. Specifically, in interviews with bodywork and paint companies that have adopted and introduced our "nax E-CUBE WB," a next-generation water-based paint for automotive refinishes, we asked them the following questions and released the interviews on YouTube: "Why did you introduce the water-based paint system?"; "What difficulties did you encounter in introducing it?"; and "What do you think about Nippon Paint's water-based paint system?" The YouTube interviews, which began in 2019, continued in 2020, and vol. 4 was released in 2021. The automotive refinish paint naxE3 (E-Cube) series includes a wet-on-wet product that can reduce drying processes and a product with improved drying properties, helping customers to reduce their energy consumption. These efforts were successful and we added

		the E3 PLUS as a new product line in 2020. The fourth E represents “engagement,” which means not only employees’ attachment to their company but also bonds between bodywork and paint companies and their customers and surrounding communities, leading to the launch of a new product, the “nax E-CUBE Water Borne (WB)” system. We believe that strengthening such engagement will lead to more sustainable business management. For the marine coatings segment, our undertakings to “reduce fuel consumption and CO_2 emissions by spreading low-friction antifouling paint on ship bottoms” was awarded in the Countermeasure Technology Introduction and Dissemination Category of the Minister of the Environment’s 2019 Commendation for Global Warming Prevention Activity on December 2, 2019. Our low-friction ship bottom paint series (LF-Sea and A-LF-Sea) has been used on a cumulative total of more than 2,900 vessels. Our antifouling biocide-free antifouling paint for ship bottoms, Aquaterrass, was nominated for the GREEN4SEA TECHNOLOGY AWARD hosted by a Europe-based non-profit organization SAFETY4SEA in 2020, and won the award in 2021. SAFETY4SEA is a nonprofit organization that fosters, builds, and promotes environmental awareness related to maritime affairs. It introduces practical shipping methods and technologies with low environmental impact for the purpose of raising people’s awareness, understanding, and penetration. Receipt of this award is effective in raising increasing recognition of our products among various stakeholders. We received the “2020 Kinka Chemical Society (KCS) Award in Environmental Technology” for the development of technology for a highly durable thermal barrier paint for roads. This award was given from the perspective of contributing to heat island control and global warming prevention, in recognition of the fact that thermal barrier paints absorb light energy from the sun, thereby reducing the rise in road surface temperature, which contributes to global warming, and suppressing the heat island effect. Attsu-9, a thermal barrier paint for roads, was evaluated not only for its durability against vehicle trampling and the flexibility of the coating film in following the characteristics of asphalt, which deforms due to abrasion, but also for its thermal barrier performance, namely, its ability to lower the surface temperatures of asphalt roads by 10 to 15°C as a measure against the heat island effect in urban areas. This product was certified under the Heat Island Protection Technology Certification System. In addition, it has been adopted for use on metropolitan and national roads,

		mainly by the Ministry of Land, Infrastructure, Transport and Tourism.
Investment in R&D	Yes	Evidence of impact: Customer requirements include improvements in fuel efficiency in automobiles and ships, improvements in energy efficiency in homes, and energy conservation in the painting process. If we fail to meet these requirements, we may not be chosen by our customers, posing the risk of our losing business in the medium and long term. Effect of impact: To reflect customer requirements into the items of materiality, we re-identified items of materiality. Timeline: 3 to 5 years Case study: (Situation) Customer requirements include improvements in fuel efficiency in automobiles and ships, improvements in energy efficiency in homes, and energy conservation in the painting process. If we fail to meet these requirements, we may not be chosen by our customers, posing the risk of our losing business in the medium and long term. (Task) We considered it necessary to reflect customer requirements in the items of materiality. (Action) The items of materiality that we identified in 2020 include “Climate Change” and “Innovation for a Sustainable Future.” Accordingly, we will focus on creating innovations as a means of solving social issues, including climate change, that are difficult to solve using conventional approaches. (Response) Based on the identified items of materiality, we are conducting research and development of products that will have the effect of reducing environmental impact in the automotive coatings, industrial coatings, decorative paints, and marine coatings sectors. We are continuing research and development to provide products that contribute to providing climate change countermeasures, and as next-generation technologies, we are considering the research and development and commercialization of infrared-reflective transparent thermal barrier paints (which reflect infrared rays simply by applying them, maintaining indoor comfort, and helping to reduce air conditioner power consumption) and coating technologies that contribute to thermal reuse using chemical heat storage materials (which store heat without equipment, enabling efficient use of heat energy). We have already commercialized a highly functional hydrophilization/hydrophilic water sliding technology that improves air conditioning efficiency in homes and automobiles, and a self-polishing antifouling paint that helps

		improve fuel efficiency in vessels. In 2020, we started drafting a new Medium-Term Plan (FY2021 - 2023), which incorporates a basic global policy for capital investment. This policy positions the three years of the new Medium-Term Plan as a period for establishing the foundation for further growth in order to ensure sustainable growth by increasing our competitive advantage and productivity while looking five to 10 years into the future. We will make offensive investments aimed at capturing growth, along with defensive investments to strengthen our resilience to risks, including climate change risks. The policy includes a plan of investing 10 billion yen in research and development, environmental protection, and other fields (of which approximately 7.3 billion yen was allocated to Japan Group in 2022).
Operations	Yes	Evidence of impact: In line with the Japanese government's GHG emissions reduction policy, we set "Climate Change," which is one of the items of materiality identified in 2020, as the top priority item. Also, we have set net-zero CO_2 emissions as a key issue in the new Medium-Term Plan (FY2021 - 2023). Under these circumstances, we have already begun to identify specific issues and consider countermeasures based on the understanding that some steps need to be taken to reduce CO_2 emissions from our operations, as we have various facilities affecting Scope 1 and 2 emissions in our manufacturing processes. Explanation of the evaluation process: For the Group as a whole, for example, we recognize the need to take action from the perspectives of both CO_2 emissions reduction measures and improvement of profitability, and we are already assessing the financial impact of renewable energy procurement and carbon pricing, and considering investments in the adoption of energy-saving equipment and the operation of renewable energy facilities. Additionally, in order to promote the optimal use of various existing energy-using facilities and devices, we are reviewing appropriate operating conditions for compressors, boilers, and other equipment. For offices, we are estimating energy reductions through steady activities in daily operations, such as efforts to turn off air conditioners and office equipment. Expected completion time of assessment: Our medium-term target is a 37% reduction in the total of Scope 1 and 2 emissions by 2030, and the single-year target is a 6.9% reduction in Scope 2 emissions (approximately 4.2% reduction

		in the total of Scope 1 and 2 emissions). As for the completion time of the assessment, the medium-term assessment is scheduled to be completed in 2031, and the assessment of the single-year reduction target for 2022 is scheduled to be completed in the first half of 2023.

C3.4

(C3.4) 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	Capital expenditures	In developing our financial plan, climate-related risks and opportunities have been a significant factor in increasing capital expenditures. To offer low-carbon products, with the aim of investing in equipment and research & development at our own plants, we have secured a quota for capital expenditures and loans to incorporate a low-carbon perspective in our new Medium-Term Plan (FY2021 - 2023). This has increased our capital expenditures, which have had a significant influence on our financial planning. In a presentation to investors several years ago, we stated that it would require approximately 100 billion yen for a long-term investment of approximately 10 years, mainly for our eight key plants in Japan; however, in light of growing interest in climate change and low-carbon emissions in recent years, we judged that this plan would be too slow to respond to market, technology, and reputational risks. Aiming to take a phased approach, starting with projects that can be completed in the short to medium term, we plan to make short-to-medium-term capital investments at domestic plants. (Case study of capital expenditures/capital allocation) (Situation) While the United Nations adopted sustainable development goals (SDGs) in 2015, private companies including Nippon Paint Group companies are also expected to help achieve them. Since value creation through environmental responses, including response to climate change, is the key to expanding our business and revenues, Nippon Paint Group is committed to mitigation of environmental impact with products as one of the CSR targets. In March 2019, we specified the definitions of eco-friendly products. Envisaging the “society that we would like to have in 2030” described below, Nippon Paint Group has discussed what we can do as a paint manufacturer to help realize it from a future-oriented perspective. [Sustainable society envisaged by Nippon Paint Group = Society that we

		would like to have in 2030 (environmental aspects)] (1) Society that can use social infrastructure for a long time and be maintained with the consumption of fewer resources (2) Society where CO_2 emissions are reduced through energy saving to curb global warming (3) Society where substances of concern are not released into the environment, maintaining clean water and air (4) Society where the pollution of water sources and oceans is prevented and the ecosystem is conserved The realization of the above society will require the creation and diffusion of eco-friendly products, especially low-carbon products; however, our domestic production facilities are aging and becoming obsolete, and we need to strengthen the system. We are not in a position to offer eco-friendly products. (Task) Our definitions of low-carbon products include products with low environmental impact on their own; products for which we directly consume less energy, i.e., less energy consumption in the production process; and products that reduce energy used by end-users after the product is sold, i.e., products that contribute to energy conservation through shorter drying times or lower baking temperatures during the coating process. Regarding the former goal, to reduce energy consumption in our production process, the challenge is to improve productivity by investing in domestic production equipment and replacing existing equipment with the latest models. (Action) We secured an investment quota as a production expansion investment plan included in the financial plan (investment for production expansion of the Chiba Plant of Nippon Paint Industrial Coatings, a powder paint production plant), and a capital investment quota for construction (consolidation) of a new plant in the new Medium-Term Plan (FY2021 - 2023) (construction of the new Okayama Plant of Nippon Paint Automotive Coatings, an automotive coatings production plant) (investment: 4.1 billion yen; production items: automotive coatings: top coat, water-based medium coat, for plastics; total building area: 4,700 m^2). (Response) Nippon Paint Industrial Coatings has begun to introduce innovative production methods for powder paints at a cost of approximately 900 million yen, along with investments to expand production (total floor area: 3,000 m^2). Specifically, at the Chiba Plant, construction in the first phase began in November 2018 with operations starting in October 2019, and the second phase began in April 2020 with operations starting in January 2021. These new production methods have led to reduced energy during the production process, resulting in the creation of low-carbon products. Construction of NPAC's Okayama Plant began in May 2021, with

		completion in February 2023 and start of operations during the second half of the same year. The new plant is designed as a state-of-the-art smart factory, and the latest equipment will be installed to enable energy conservation and low-carbon emissions. The CO_2 reduction rate for each product will be evaluated after the plant goes into operation in the future.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending and revenue that are aligned with your organization's climate transition?

	Identification of spending and revenue that are aligned with your organization's climate transition
Row 1	Yes, we identify alignment with our climate transition plan

C3.5a

(C3.5a) Quantify the percentage shares of your spending and revenue that are aligned with your organization's climate transition.

Financial Metric

OPEX

Type of alignment being reported for this financial metric

Alignment with our climate transition plan

Taxonomy under which information is being reported

Objective under which alignment is being reported

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)

2,637,255

Percentage share of selected financial metric aligned in the reporting year (%)

0.01

Percentage share of selected financial metric planned to align in 2025 (%)

0.01

Percentage share of selected financial metric planned to align in 2030 (%)

0.02

Describe the methodology used to identify spending/revenue that is aligned

We calculated the amount by dividing the cost of renewable energy, including non-fossil certificate fees by our domestic sales in FY2022.
2022: 0.0014%
2025: 0.0064%
2030: 0.0145%

C4. Targets and performance

C4.1

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

Absolute target

C4.1a

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

Target reference number

Abs 1

Is this a science-based target?

Yes, we consider this a science-based target, but we have not committed to seek validation of this target by the Science Based Targets initiative within the next two years

Target ambition

1.5°C aligned

Year target was set

2021

Target coverage

Country/area/region

Scope(s)

Scope 1
Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Base year

2019

Base year Scope 1 emissions covered by target (metric tons CO2e)

16,824

Base year Scope 2 emissions covered by target (metric tons CO2e)

31,739

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)

Base year total Scope 3 emissions covered by target (metric tons CO2e)

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

48,563

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2050

Targeted reduction from base year (%)

100

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

0

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

15,669

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

25,844

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

41,513

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

14.5172250479

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

Target coverage: All Scope 1 and 2 emissions in domestic Group companies

Plan for achieving target, and progress made to the end of the reporting year

Aiming for 100% reduction by 2050, we plan to reduce Scope 1 and 2 emissions by 37% by 2030. We achieved a 14.5% reduction in 2022.

List the emissions reduction initiatives which contributed most to achieving this target

Target reference number

Abs 2

Is this a science-based target?

Yes, we consider this a science-based target, but we have not committed to seek validation of this target by the Science Based Targets initiative within the next two years

Target ambition

1.5°C aligned

Year target was set

2021

Target coverage

Country/area/region

Scope(s)

Scope 1
Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Base year

2019

Base year Scope 1 emissions covered by target (metric tons CO2e)

16,824

Base year Scope 2 emissions covered by target (metric tons CO2e)

31,739

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)

Base year total Scope 3 emissions covered by target (metric tons CO2e)

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

48,563

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2030

Targeted reduction from base year (%)

37

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

30,594.69

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

15,669

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

25,844

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

41,513

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

39.2357433726

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

Target coverage: Scope 1 and 2 emissions in domestic Group companies

Plan for achieving target, and progress made to the end of the reporting year

Aiming to achieve a 37% reduction in Scope 1 and 2 emissions by 2030, we plan to reduce emissions by approximately 7% every year from 2022 to 2030.
We achieved a 14.5% reduction in 2022.

List the emissions reduction initiatives which contributed most to achieving this target

C4.2

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

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

C4.2a

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

Target reference number
Low 1

Year target was set
2021

Target coverage
Country/area/region

Target type: energy carrier
Electricity

Target type: activity
Consumption

Target type: energy source
Renewable energy source(s) only

Base year
2019

Consumption or production of selected energy carrier in base year (MWh)
68,296

% share of low-carbon or renewable energy in base year
0

Target year
2030

% share of low-carbon or renewable energy in target year
62.1

% share of low-carbon or renewable energy in reporting year
6.9

% of target achieved relative to base year [auto-calculated]
11.1111111111

Target status in reporting year
Achieved

Is this target part of an emissions target?
Part of Abs1 and Abs2 of C4.1a

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative.

Please explain target coverage and identify any exclusions

Target coverage:
Electricity consumption of our Group companies in Japan

Plan for achieving target, and progress made to the end of the reporting year

List the actions which contributed most to achieving this target

Introduction of renewable electricity reflecting non-fossil certificates

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Country/area/region

Absolute/intensity emission target(s) linked to this net-zero target

Abs1
Abs2

Target year for achieving net zero

2050

Is this a science-based target?

Yes, we consider this a science-based target, but we have not committed to seek validation of this target by the Science Based Targets initiative within the next two years

Please explain target coverage and identify any exclusions

Scope 1 and 2 emissions at our Group companies in Japan

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Unsure

Planned milestones and/or near-term investments for neutralization at target year

Planned actions to mitigate emissions beyond your value chain (optional)

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	4	
To be implemented*	2	40
Implementation commenced*	23	197
Implemented*	10	2,716
Not to be implemented	0	

C4.3b

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

Initiative category & Initiative type

Low-carbon energy consumption

Low-carbon electricity mix

Estimated annual CO2e savings (metric tonnes CO2e)

2,009

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

0

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

3,000,000

Payback period

No payback

Estimated lifetime of the initiative

1-2 years

Comment

We began purchasing renewable electricity reflecting non-fossil certificates from an electric utility in 2022. We plan to continue this as one of our renewable energy procurement methods toward achieving carbon neutrality by 2050.

Initiative category & Initiative type

Energy efficiency in production processes
Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)

6.3

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

323,730

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

6,000,000

Payback period

16-20 years

Estimated lifetime of the initiative

Ongoing

Comment

Initiative category & Initiative type

Low-carbon energy consumption
Other, please specify
Converted boiler fuel from heavy oil to LNG

Estimated annual CO2e savings (metric tonnes CO2e)

701

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

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

0

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

5,000,000

Payback period

4-10 years

Estimated lifetime of the initiative

Ongoing

Comment

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	In connection with the Minamata Convention against mercury, we changed from mercury-containing lighting to LED lighting, which has high energy-saving efficiency.
Dedicated budget for energy efficiency	Introduction of the latest energy-saving equipment at the time of equipment replacement
Employee engagement	・ Improvement of manufacturing processes and enhancement and maintenance of the operating efficiency of production equipment ・ Other activities, including turning off lights frequently, adjusting air conditioning temperatures, and “cool-biz” activities (activities to promote more casual office clothing during the summer)

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Chemicals and plastics

Other, please specify

Coatings with reduced environmental impact (low-temperature curing, process time shortening, reduction of coating waste, the effect of reducing GHG emissions in the use stage of coated products, etc.)

Description of product(s) or service(s)

We have several product groups divided by customer. Examples of products that can contribute to reducing GHG emissions are listed below.

[Automotive coatings sector]

As continuing examples from last year, products that can contribute to reducing GHG emissions include those that can reduce coating energy by shortening the coating process, and those that can reduce the amount of paint used by achieving high coating efficiency with electrodeposition paints. Many of these products are water-based paints, and electrodeposition paints are tin-free. As they achieve the reduction of environmental impact both related to and not related to climate change, we will continue to promote the introduction of these products into the market.

[Industrial coatings sector]

Powder paints, water-based and solvent-based high-solids paints, and thermal barrier paints are our representative eco-friendly products. Powder paints have a high paint conversion rate (>80%, vs. 30-50% for liquid paints) and minimize VOC emissions in the coating process. Solvent-based high-solids paints are effective in reducing the number of spray applications for the same film thickness, while thermal barrier paints are applied to roofs and roads to reduce the air conditioning load. The shift to these products continues to progress steadily.

[Decorative and marine paints sector]

We are continuing to promote further sales expansion of coatings with high weather resistance using inorganic resins, thermal barrier coatings, and rust-preventive coatings that respond to the need for shorter processes.

In the marine coatings sector, we are contributing to the reduction of GHG emissions from marine vessels by promoting products that provide high antifouling performance while reducing the elution of antifouling agents contained in paints, and reducing the fuel consumption of marine vessels as usual.

[Fine chemicals and other sectors]
In the surface treatment agents field, we are developing zircon chemical conversion systems, which further reduce the amount of metal used and waste generated while maintaining the same performance as before, and spray-type treatment agents that eliminate treatment baths and reduce water consumption and fuels for temperature control. We continue to expand our lineup of products that reduce the operating load of air conditioners by applying antifouling coatings to the aluminum fins of air conditioners. Furthermore, we are testing the Sustainability Scoreboard (scoring system), which is used to evaluate products, and reviewed the product aggregate classification.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

11

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology	We calculate Scope 2 emissions based on both the location and the market, starting in 2022.

C5.1c

(C5.1c) Have your organization's base year emissions and past years' emissions been recalculated as a result of any changes or errors reported in C5.1a and/or C5.1b?

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past-year recalculation
Row 1	Yes	Scope 2, market-based	We recalculated market-based Scope 2 emissions for the base year 2019.	Yes

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

16,824

Comment

Calculated using the factors specified in the Carbon Neutral Action Plan established by the Ministry of Economy, Trade and Industry and the Japan Chemical Industry Association

Scope 2 (location-based)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

28,889

Comment

Calculated using the factors specified in the Carbon Neutral Action Plan established by the Ministry of Economy, Trade and Industry and the Japan Chemical Industry Association

Scope 2 (market-based)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

31,739

Comment

The market-based emissions were calculated using the factors in accordance with the Act on Promotion of Global Warming Countermeasures (the “Global Warming Countermeasures Act”) and the Anti-Global Warming Act (the “residual” emission factors after adjustment by each electric utility).

Scope 3 category 1: Purchased goods and services

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

1,052,051

Comment

The amounts of activities for items procured as raw materials and items procured for business were calculated as follows.

・ Those for semi-finished products and raw materials were calculated by multiplying their purchased weight by the values listed in IDEA Ver. 3.1 as intensity figures.
・ Those for procured items other than semi-finished products and raw materials were calculated by multiplying their purchase prices by the values listed in the Emission Intensity Database for Calculating Greenhouse Gas Emissions of Organizations throughout the Supply Chain as the intensity figures. Since the intensity figures in question include those for emissions from the transportation of procured items, the upstream transportation emissions in Category 4 are included in the emissions calculated for this category.
Since in the previous fiscal year, emissions in this category were also calculated on a purchase price basis for semi-finished products and raw materials, the calculation method used was different from the one used for the last fiscal year for some items.

Scope 3 category 2: Capital goods

Base year start
January 1, 2021

Base year end
December 31, 2021

Base year emissions (metric tons CO2e)
112,239

Comment
The amount of activities was calculated by multiplying the amount of fixed assets acquisition (global annual acquisition amount) disclosed in the Annual Securities Report by the value listed in the MOE's DB Ver. 3.0 as the intensity figure for organic chemical industrial products (excluding petrochemical basic products). The fixed assets in the scope include tangible and intangible fixed assets.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start
January 1, 2021

Base year end
December 31, 2021

Base year emissions (metric tons CO2e)
7,936

Comment
The amounts of activities were calculated by multiplying the values of energy consumption data by fuel at all domestic sites of all consolidated subsidiaries subject to the calculation and reporting by the values listed in the MOE's DB Ver. 3.0 and LCA DB (IDEA Ver. 2.3) as the intensity figures by fuel.

Scope 3 category 4: Upstream transportation and distribution

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

37,450

Comment

Based on the emissions reported by the Nippon Paint (“NPTU”) in accordance with the Global Warming Countermeasures Act in Japan, we calculated the total emissions from the shipment of our products by estimating the emissions of other Group companies in Japan Group in the scope by comparing the transportation volume between those companies and NPTU. In addition to domestic emissions, we also calculated the emissions from overseas transportation by ship. The amount of activities was calculated by multiplying the total overseas transportation volume (weight) by the value listed in the MOE’s DB Ver. 3.0 as the intensity figure for transportation by ship. Total emissions from domestic and overseas transportation were calculated.

Scope 3 category 5: Waste generated in operations

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

15,609

Comment

The amounts of activities were calculated by multiplying the annual waste disposal volume for each waste type by the intensity figure for each waste type listed in the MOE’s DB Ver. 3.0.

Scope 3 category 6: Business travel

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

428

Comment

The amount of activities was calculated by multiplying the total number of employees on a consolidated basis (in Japan) by the intensity figure per employee listed in the MOE's DB Ver. 3.0.

Scope 3 category 7: Employee commuting

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

1,455

Comment

The amount of activities was calculated by multiplying the total number of employees on a consolidated basis (in Japan) by the largest site-based intensity figure listed in the MOE's DB Ver. 3.0.

Scope 3 category 8: Upstream leased assets

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

Emissions from all assets that we lease are covered by Scope 1 and 2, and therefore Scope 3 emissions are zero and this category was excluded from the calculation. (Specific examples) Scope 1 (using fuel that we purchased): Leased vehicles and forklifts / Scope 2 (using electricity that we purchased): Printers, PCs, measuring instruments, and forklifts (rechargeable type)

Scope 3 category 9: Downstream transportation and distribution

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

Because emissions from downstream transportation are dependent on a wide variety of customer products and are therefore highly uncertain information

Scope 3 category 10: Processing of sold products

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

In accordance with the WBCSD Guidance for the Chemical Sector, this category was excluded from the calculation as zero emissions.

Scope 3 category 11: Use of sold products

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

In accordance with the WBCSD Guidance for the Chemical Sector, this category was excluded from the calculation as zero emissions.

Scope 3 category 12: End of life treatment of sold products

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

57,395

Comment

Of the total annual domestic distribution volume (weight basis), the portion excluding transportation between our sites was calculated as the annual product shipment weight. In accordance with the WBCSD Guidance for the Chemical Sector, it was assumed that, of the annual product shipment volume, 80% was landfilled and 20% was incinerated. The amounts of activities were calculated by multiplying the respective annual product

shipment weight by the intensity figure by disposal method listed in the LCA DB (IDEA Ver. 2.3).

Scope 3 category 13: Downstream leased assets

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

Since there are no leased assets held for rental purposes, this category was excluded from the calculation as zero emissions.

Scope 3 category 14: Franchises

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

Since there is no franchise agreement concluded, this category was excluded from the calculation as zero emissions.

Scope 3 category 15: Investments

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

Since there are no investment activities for commercial purposes, this category was excluded from the calculation as zero emissions.

Scope 3: Other (upstream)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

Since this category is not applicable, it was excluded from the calculation as zero emissions.

Scope 3: Other (downstream)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

Since this category is not applicable, it was excluded from the calculation as zero emissions.

C5.3

(C5.3) 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, Superseded 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)
The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard
Other, please specify
CO_2 conversion factor specified by Keidanren / Japan Chemical Industry Association

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO_2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

15,669

Start date

January 1, 2022

End date

December 31, 2022

Comment

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)

15,044

Start date

January 1, 2021

End date

December 31, 2021

Comment

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)

15,065

Start date

January 1, 2020

End date

December 31, 2020

Comment

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)

16,824

Start date

January 1, 2019

End date

December 31, 2019

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

The location-based emissions were calculated using the CO_2 conversion factor specified in the Carbon Neutral Action Plan established by Keidanren and the Japan Chemical Industry Association as a uniform emission factor in Japan.
The market-based emissions were calculated using the emission factor after adjustment for the electricity menu contracted by each site among emission factors by electric utility (for calculating greenhouse gas emissions of specified emitters).

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO_2e?

Reporting year

Scope 2, location-based

27,396

Scope 2, market-based (if applicable)

25,844

Start date

January 1, 2022

End date

December 31, 2022

Comment

The location-based emissions were calculated using the CO_2 conversion factor specified in the Carbon Neutral Action Plan established by Keidanren and the Japan Chemical Industry Association as a uniform emission factor in Japan.
The market-based emissions were calculated using the emission factor after adjustment for the electricity menu contracted by each site among emission factors by electric utility (for calculating greenhouse gas emissions of specified emitters).

Past year 1

Scope 2, location-based

27,972

Scope 2, market-based (if applicable)

28,071

Start date

January 1, 2021

End date

December 31, 2021

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

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

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,004,908

Emissions calculation methodology

Hybrid method

Spend-based method

Other, please specify

The amounts of activities for items procured as raw materials and items procured for business were calculated as follows. ・ Those for semi-finished products and raw materials were calculated by multiplying their purchased weight by the values listed in IDEA Ver. 3.2 as intensity figures. ・ Those for procured items other than semi-finished products and raw materials were calculated by multiplying their purchase prices by the values listed in the Emission Intensity Database for Calculating Greenhouse Gas Emissions of Organizations throughout the Supply Chain as the intensity figures. Since the intensity figures in question include those

for emissions from the transportation of procured items, the upstream transportation emissions in Category 4 are included in the emissions calculated for this category.

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

0

Please explain

・ The amounts of activities for items procured as raw materials and items procured for business were calculated as follows.
・ Those for semi-finished products and raw materials were calculated by multiplying their purchased weight by the values listed in IDEA Ver. 3.2 as intensity figures.
・ Those for procured items other than semi-finished products and raw materials were calculated by multiplying their purchase prices by the values listed in the Emission Intensity Database for Calculating Greenhouse Gas Emissions of Organizations throughout the Supply Chain Ver. 3.3, published by the Ministry of Environment (the "MOE's DB Ver. 3.3") as the intensity figures.
・ Although emissions in this category were calculated on a purchase price basis also for semi-finished products and raw materials until FY2021, the calculation method used was changed to the above one for some items since the results for FY2021.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

116,898

Emissions calculation methodology

Spend-based method

Other, please specify

The amount of activities was calculated by multiplying the amount of fixed assets acquisition (global annual acquisition amount) disclosed in the Annual Securities Report by the value listed in the MOE's DB Ver. 3.3 as the intensity figure for organic chemical industrial products (excluding petrochemical basic products). The fixed assets in the scope include tangible and intangible fixed assets.

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

0

Please explain

The amount of activities was calculated by multiplying the amount of fixed assets acquisition (global annual acquisition amount) disclosed in the Annual Securities Report by the value listed in the MOE's DB Ver. 3.3 as the intensity figure for organic chemical industrial products (excluding petrochemical basic products). The fixed assets in the scope include tangible and intangible fixed assets.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

7,553

Emissions calculation methodology

Fuel-based method

Other, please specify

The amounts of activities were calculated by multiplying the values of energy consumption data by fuel at all domestic sites of all consolidated subsidiaries subject to the calculation and reporting by the values listed in the MOE's DB Ver. 3.3 and LCA DB (IDEA Ver. 3.2) as the intensity figures by fuel.

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

0

Please explain

The amounts of activities were calculated by multiplying the values of energy consumption data by fuel at all domestic sites of all consolidated subsidiaries subject to the calculation and reporting by the values listed in the MOE's DB Ver. 3.3 and LCA DB (IDEA Ver. 2.3) as the intensity figures by fuel.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

34,839

Emissions calculation methodology

Hybrid method

Distance-based method

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

0

Please explain

Based on the emissions reported by NPTU in accordance with the Global Warming Countermeasures Act in Japan, we calculated the total emissions from the shipment of our products by estimating the emissions of other domestic Group companies in the scope by comparing the transportation volume between those companies and NPTU. In addition to domestic emissions, we also calculated the emissions from overseas transportation by ship. The amount of activities was calculated by multiplying the total

overseas transportation volume (weight) by the value listed in the MOE's DB Ver. 3.3 as the intensity figure for transportation by ship. Total emissions from domestic and overseas transportation were calculated.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

14,458

Emissions calculation methodology

Waste-type-specific method

Other, please specify

The amount of activities was calculated by multiplying the annual waste disposal volume for each waste type by the intensity figure for each waste type listed in the MOE's DB Ver. 3.3.

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

0

Please explain

The amount of activities was calculated by multiplying the annual waste disposal volume for each waste type by the intensity figure for each waste type listed in the MOE's DB Ver. 3.3.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

470

Emissions calculation methodology

Average data method

Site-specific method

Other, please specify

The amount of activities was calculated by multiplying the total number of employees on a consolidated basis (in Japan) by the intensity figure per employee listed in the MOE's DB Ver. 3.3.

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

0

Please explain

The amount of activities was calculated by multiplying the total number of employees on a consolidated basis (in Japan) by the intensity figure per employee listed in the MOE's DB Ver. 3.3.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,595

Emissions calculation methodology

Average data method

Site-specific method

Other, please specify

The amount of activities was calculated by multiplying the total number of employees in Japan by the largest site-based intensity figure listed in the MOE's DB Ver. 3.3.

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

0

Please explain

The amount of activities was calculated by multiplying the total number of employees in Japan by the largest site-based intensity figure listed in the MOE's DB Ver. 3.3.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Emissions from all assets that we lease are covered by Scope 1 and 2, and therefore Scope 3 emissions are zero and this category was excluded from the calculation. (Specific examples) Scope 1 (using fuel that we purchased): Leased vehicles and forklifts / Scope 2 (using electricity that we purchased): Printers, PCs, measuring instruments, and forklifts (rechargeable type)

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Please explain

Emissions from downstream transportation and distribution were included in Category 4 (Upstream transportation and distribution).

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

In accordance with the WBCSD Guidance for the Chemical Sector, Category 10 was excluded from the calculation as zero emissions.

Use of sold products

Evaluation status

Not relevant, explanation provided

Please explain

In accordance with the WBCSD Guidance for the Chemical Sector, Category 11 was excluded from the calculation as zero emissions.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

52,390

Emissions calculation methodology

Hybrid method
Average data method
Distance-based method
Other, please specify

Of the total annual domestic distribution volume (weight basis), the portion excluding transportation between our sites was calculated as the annual product shipment weight. In accordance with the WBCSD Guidance for the Chemical Sector, it was assumed that, of the annual product shipment volume, 80% was landfilled and 20% was incinerated. The amounts of activities were calculated by multiplying the respective annual product shipment weight by the intensity figure by disposal method listed in the LCA DB (IDEA Ver. 3.2).

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

0

Please explain

Of the total annual domestic distribution volume (weight basis), the portion excluding transportation between our sites was calculated as the annual product shipment weight. In accordance with the WBCSD Guidance for the Chemical Sector, it was assumed that, of the annual product shipment volume, 80% was landfilled and 20% was incinerated. The amounts of activities were calculated by multiplying the respective annual product shipment weight by the intensity figure by disposal method listed in the LCA DB (IDEA Ver. 2.3).

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Since we do not own leased assets for rental purposes, we do not have quantified figures or applicable actual operations and thus this category was excluded from the calculation as zero emissions.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Since there is no franchise agreement concluded, we do not have quantified figures or applicable actual operations and thus this category was excluded from the calculation as zero emissions.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

Since there are no investment activities for commercial purposes, we do not have quantified figures or applicable actual operations and thus this category was excluded from the calculation as zero emissions.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

Since this category is not applicable, we do not have quantified figures or applicable actual operations and thus it was excluded from the calculation as zero emissions.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

Since this category is not applicable, we do not have quantified figures or applicable actual operations and thus it was excluded from the calculation as zero emissions.

C6.5a

(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

Start date
January 1, 2021

End date
December 31, 2021

Scope 3: Purchased goods and services (metric tons CO2e)
1,052,051

Scope 3: Capital goods (metric tons CO2e)
112,239

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
7,936

Scope 3: Upstream transportation and distribution (metric tons CO2e)
37,450

Scope 3: Waste generated in operations (metric tons CO2e)
15,609

Scope 3: Business travel (metric tons CO2e)
428

Scope 3: Employee commuting (metric tons CO2e)
1,455

Scope 3: Upstream leased assets (metric tons CO2e)
0

Scope 3: Downstream transportation and distribution (metric tons CO2e)
0

Scope 3: Processing of sold products (metric tons CO2e)
0

Scope 3: Use of sold products (metric tons CO2e)
0

Scope 3: End of life treatment of sold products (metric tons CO2e)
57,395

Scope 3: Downstream leased assets (metric tons CO2e)
0

Scope 3: Franchises (metric tons CO2e)

0

Scope 3: Investments (metric tons CO2e)

0

Scope 3: Other (upstream) (metric tons CO2e)

0

Scope 3: Other (downstream) (metric tons CO2e)

0

Comment

Past year 2

Start date

January 1, 2020

End date

December 31, 2020

Scope 3: Purchased goods and services (metric tons CO2e)

736,831

Scope 3: Capital goods (metric tons CO2e)

81,969

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

7,970

Scope 3: Upstream transportation and distribution (metric tons CO2e)

0

Scope 3: Waste generated in operations (metric tons CO2e)

17,499

Scope 3: Business travel (metric tons CO2e)

456

Scope 3: Employee commuting (metric tons CO2e)

1,550

Scope 3: Upstream leased assets (metric tons CO2e)

0

Scope 3: Downstream transportation and distribution (metric tons CO2e)

0

Scope 3: Processing of sold products (metric tons CO2e)
0

Scope 3: Use of sold products (metric tons CO2e)
0

Scope 3: End of life treatment of sold products (metric tons CO2e)
66,632

Scope 3: Downstream leased assets (metric tons CO2e)
0

Scope 3: Franchises (metric tons CO2e)
0

Scope 3: Investments (metric tons CO2e)
0

Scope 3: Other (upstream) (metric tons CO2e)
0

Scope 3: Other (downstream) (metric tons CO2e)
0

Comment

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
0.0000002231

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
41,513

Metric denominator
unit total revenue

Metric denominator: Unit total

186,062,000,000

Scope 2 figure used

Market-based

% change from previous year

5.2

Direction of change

Decreased

Reason(s) for change

Change in renewable energy consumption
Other emissions reduction activities

Please explain

In 2021 and 2022, the emissions were 0.0000002353 t-CO_2/yen and 0.0000002231 t-CO_2/yen, respectively, representing a decrease of 5.2%.
This was due to the introduction of renewable energy reflecting non-fossil certificates, which reduced CO_2 emissions by 2,009 t-CO_2, as well as due to the promotion of energy-saving activities.

C7. Emissions breakdowns

C7.1

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

No

C7.2

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

Country/area/region	Scope 1 emissions (metric tons CO2e)
Japan	15,669

C7.3

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

By business division

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Automotive coatings business	7,194
General industrial coatings business	2,988
Decorative paints business (for construction and heavy-duty corrosion-resistant structures, etc.)	5,016
Surface treatment business	271
Marine paints business (almost all production is outsourced)	148
Export/import business of raw materials and finished products	33
Group supervisory function	18

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 CO_2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Chemicals production activities	14,161	

C7.5

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

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Japan	27,396	25,844

C7.6

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

By business division

C7.6a

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

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Automotive coatings business	10,550	9,575

General industrial coatings business	7,511	7,215
Decorative paints business (for architectural use and heavy-duty corrosion-resistant structures, etc.)	7,613	7,376
Surface treatment business	822	869
Marine paints business (almost all production is outsourced)	428	417
Export/import business of raw materials and finished products	85	65
Group supervisory function	386	327

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Yes

C7.7a

(C7.7a) Break down your gross Scope 1 and Scope 2 emissions by subsidiary.

Subsidiary name

Nippon Paint Automotive Coatings Co., Ltd.

Primary activity

Specialty chemicals

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

Scope 1 emissions (metric tons CO2e)

7,194

Scope 2, location-based emissions (metric tons CO2e)

10,550

Scope 2, market-based emissions (metric tons CO2e)

9,575

Comment

Subsidiary name

Nippon Paint Industrial Coatings Co., Ltd.

Primary activity

Specialty chemicals

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

Scope 1 emissions (metric tons CO2e)

2,988

Scope 2, location-based emissions (metric tons CO2e)

7,511

Scope 2, market-based emissions (metric tons CO2e)

7,215

Comment

Subsidiary name

Nippon Paint Co., Ltd.

Primary activity

Specialty chemicals

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

Scope 1 emissions (metric tons CO2e)

5,016

Scope 2, location-based emissions (metric tons CO2e)

7,613

Scope 2, market-based emissions (metric tons CO2e)

7,376

Comment

Subsidiary name

Nippon Paint Surf Chemicals Co., Ltd.

Primary activity

Specialty chemicals

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

Scope 1 emissions (metric tons CO2e)

271

Scope 2, location-based emissions (metric tons CO2e)

822

Scope 2, market-based emissions (metric tons CO2e)

869

Comment

Subsidiary name

Nippon Paint Marine Coatings Co., Ltd.

Primary activity

Specialty chemicals

Select the unique identifier(s) you are able to provide for this subsidiary
No unique identifier

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

Scope 1 emissions (metric tons CO2e)
148

Scope 2, location-based emissions (metric tons CO2e)
428

Scope 2, market-based emissions (metric tons CO2e)
417

Comment

Subsidiary name
Nippon Paint Materials Co., Ltd.

Primary activity
Chemicals wholesale & distribution

Select the unique identifier(s) you are able to provide for this subsidiary
No unique identifier

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

Scope 1 emissions (metric tons CO2e)

33

Scope 2, location-based emissions (metric tons CO2e)

85

Scope 2, market-based emissions (metric tons CO2e)

65

Comment

Subsidiary name

Nippon Paint Corporate Solutions Co., Ltd.

Primary activity

Other professional services

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

Scope 1 emissions (metric tons CO2e)

18

Scope 2, location-based emissions (metric tons CO2e)

386

Scope 2, market-based emissions (metric tons CO2e)

327

Comment

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 CO_2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Chemicals production activities	22,282	20,924	

C-CH7.8

(C-CH7.8) Disclose the percentage of your organization's Scope 3, Category 1 emissions by purchased chemical feedstock.

Purchased feedstock	Percentage of Scope 3, Category 1 tCO2e from purchased feedstock	Explain calculation methodology
Aromatics extraction	4	Emissions from the applicable items (toluene and aromatic mixed solvents) among raw materials purchased in 2022 were calculated by multiplying their weight by the values listed in IDEA Ver. 3.2 as intensity figures. The calculated value of 36,671 tons was divided by the total C6.5 Scope 3 Category 1 emissions of 1,004,908 tons.

Polymers	54	Emissions from the applicable items (alkyd resins, epoxy resins, etc.) among raw materials purchased in 2022 were calculated by multiplying their weight by the values listed in IDEA Ver. 3.2 as intensity figures. The calculated value of 538,948 tons was divided by the total C6.5 Scope 3 Category 1 emissions of 1,004,908 tons.
Specialty chemicals	1	Emissions from the applicable items (additives, special monomers, pigments, etc.) among raw materials purchased in 2022 was calculated by multiplying their weight by the values listed in IDEA Ver. 3.2 as intensity figures. The calculated value of 164 tons was divided by the total C6.5 Scope 3 Category 1 emissions of 1,004,908 tons.
Other base chemicals	10	Emissions from the applicable items (synthetic solvents, general monomers, soda industry products, etc.) among raw materials purchased in 2022 were calculated by multiplying their weight by the values listed in IDEA Ver. 3.2 as intensity figures. The calculated value of 100,676 tons was divided by the total C6.5 Scope 3 Category 1 emissions of 1,004,908 tons.

C-CH7.8a

(C-CH7.8a) Disclose sales of products that are greenhouse gases.

	Sales, metric tons	Comment
Carbon dioxide (CO2)	0	
Methane (CH4)	0	
Nitrous oxide (N2O)	0	
Hydrofluorocarbons (HFC)	0	
Perfluorocarbons (PFC)	0	
Sulphur hexafluoride (SF6)	0	
Nitrogen trifluoride (NF3)	0	

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 in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	2,009	Decreased	4.5	We purchased 2009 t-CO_2 worth of renewable electricity reflecting non-fossil certificates. 2,009/44,229 (Scope 1 and 2 emissions in 2021) = 4.5%
Other emissions reduction activities	707	Decreased	1.6	Other emissions reduction activities resulted in a reduction of 707 t-CO_2. 707/44,229 (Scope 1 and 2 emissions in 2021) = 1.6%
Divestment	0	No change	0	No change
Acquisitions	0	No change	0	No change
Mergers	0	No change	0	No change
Change in output	0	No change	0	No change
Change in methodology	0	No change	0	No change
Change in boundary	0	No change	0	No change
Change in physical operating conditions	0	No change	0	No change
Unidentified	0	No change	0	No change
Other	0	No change	0	No change

C7.9b

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

Market-based

C8. Energy

C8.1

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

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

C8.2

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

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	78,196	78,196
Consumption of purchased or acquired electricity		4,712	60,053	64,766

Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		4,712	138,249	142,962

C-CH8.2a

(C-CH8.2a) Report your organization's energy consumption totals (excluding feedstocks) for chemical production activities in MWh.

Consumption of fuel (excluding feedstocks)

Heating value

HHV (higher heating value)

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

71,126

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

71,126

Consumption of purchased or acquired electricity

MWh consumed from renewable sources inside chemical sector boundary

4,569

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

48,107

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

52,676

Consumption of self-generated non-fuel renewable energy

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

0

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

0

Total energy consumption

MWh consumed from renewable sources inside chemical sector boundary

4,569

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

119,234

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

123,803

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	No
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.

Sustainable biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Other biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Coal

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Oil

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Gas

Heating value

HHV

Total fuel MWh consumed by the organization

7,888

MWh fuel consumed for self-generation of heat

7,888

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

Comment

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

HHV

Total fuel MWh consumed by the organization

70,308

MWh fuel consumed for self-generation of heat

70,308

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

Comment

Total fuel

Heating value

HHV

Total fuel MWh consumed by the organization

78,196

MWh fuel consumed for self-generation of heat

78,196

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

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	0	0	0	0
Heat	24,042	24,042	0	0
Steam	253,449	253,449	0	0

Cooling	47,438	47,438	0	0

C-CH8.2d

(C-CH8.2d) Provide details on electricity, heat, steam, and cooling your organization has generated and consumed for chemical production activities.

Electricity

Total gross generation inside chemicals sector boundary (MWh)

0

Generation that is consumed inside chemicals sector boundary (MWh)

0

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Heat

Total gross generation inside chemicals sector boundary (MWh)

24,042

Generation that is consumed inside chemicals sector boundary (MWh)

24,042

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Steam

Total gross generation inside chemicals sector boundary (MWh)

114,203

Generation that is consumed inside chemicals sector boundary (MWh)

114,203

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Cooling

Total gross generation inside chemicals sector boundary (MWh)

42,780

Generation that is consumed inside chemicals sector boundary (MWh)

42,780

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

C8.2e

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

Country/area of low-carbon energy consumption

Japan

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

Mix of mainly solar power, and partially hydropower and biomass

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

4,712

Tracking instrument used

Contract

Country/area of origin (generation) of the low-carbon energy or energy attribute

Japan

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area

Japan

Consumption of purchased electricity (MWh)

0

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

0

C-CH8.3

(C-CH8.3) Does your organization consume fuels as feedstocks for chemical production activities?

No

C9. Additional metrics

C9.1

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

C-CH9.3a

(C-CH9.3a) Provide details on your organization's chemical products.

Output product

Specialty chemicals

Production (metric tons)

270,628

Capacity (metric tons)

329,496

Direct emissions intensity (metric tons CO2e per metric ton of product)

0.052

Electricity intensity (MWh per metric ton of product)

0.194

Steam intensity (MWh per metric ton of product)

0

Steam/ heat recovered (MWh per metric ton of product)

0

Comment

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	The development investment (technology development) is also divided by sector. We are piloting a Green Design Review to be implemented into our R&D project management system and reviewed the tabulations.

C-CH9.6a

(C-CH9.6a) Provide details of your organization's investments in low-carbon R&D for chemical production activities over the last three years.

Technology area

Other, please specify

Development of water-based and powder paints, development of highly durable paints

Stage of development in the reporting year

Large scale commercial deployment

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

6

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years

6

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

In the industrial coatings sector, in using water-based paints, the challenge to use renewable energy sources for drying energy must be dealt with; however, water-based paints can promote drastic fossil-free measures by replacing the main solvent in paints by water, which will ultimately be in harmony with climate change countermeasures. In addition, continued promotion of powder coating with a high paint conversion rate can contribute to climate change mitigation by building a process that achieves material-saving and low waste.

Technology area

Other, please specify

Development of low-friction ship-bottom paints, and material-saving and low waste paints

Stage of development in the reporting year

Large scale commercial deployment

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

9

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years

9

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

Reducing energy consumption in the marine transportation sector is an urgent issue, and we have been working from early on to reduce hull resistance by promoting the antifouling function of ship bottom paints. By continuing and enhancing this project, we will contribute to climate change mitigation.

Technology area

Other, please specify

Development of materials for rechargeable batteries, process shortening products, and highly durable products

Stage of development in the reporting year

Large scale commercial deployment

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

10

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years

10

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

In the utilization of variable renewable energy, batteries are required to be more widely used, and we can contribute to climate change mitigation through the development of battery materials. In addition, as a basic function, the longer life of treated products with surface treatment agents can contribute to climate change mitigation.

Technology area

Other, please specify

Development of water-based paints, development of highly durable paints

Stage of development in the reporting year

Large scale commercial deployment

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

4

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years

4

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

In the field of decorative paints, which do not require drying energy, water-based paints can promote drastic fossil-free measures by replacing the main solvent in paints by water, and can also reduce the GHG of the paints themselves, thus directly contributing to climate change mitigation. In addition, developing highly durable products, which can extend the life cycle of buildings, consequently contributing to LC-GHG reduction in buildings.

Technology area

Other, please specify

Development of process shortening products and low temperature curing products

Stage of development in the reporting year

Large scale commercial deployment

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

13

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years

13

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

In the automotive coatings sector, we are focusing on measures to reduce GHG in our customers' coating processes and will continue to contribute to GHG reduction in automotive production.

C10. Verification

C10.1

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

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

Scope 3	No third-party verification or assurance

C10.2

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

No, 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)?

No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

No

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.

Type of internal carbon price

Shadow price

How the price is determined

Alignment with the price of a carbon tax

Cost of required measures to achieve emissions reduction targets

Objective(s) for implementing this internal carbon price

Change internal behavior

Drive low-carbon investment

Scope(s) covered

Scope 2

Pricing approach used – spatial variance

Uniform

Pricing approach used – temporal variance

Evolutionary

Indicate how you expect the price to change over time

Non-fossil certificate price: Expected to gradually increase each year and triple around 2030 (Approximately 0.5 yen to 1.5 yen)
Carbon price: Although the timing of the increase will be based on changes in Japan's system, the price is expected to increase by approximately 3,400% to around 10,000 yen around 2030, on par with Europe and the U.S. (Current anti-global warming tax 289 yen to 10,000 yen)

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO_2e)

1,418

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO_2e)

3,073

Business decision-making processes this internal carbon price is applied to

Operations
Procurement

Mandatory enforcement of this internal carbon price within these business decision-making processes

Yes, for some decision-making processes, please specify

One of the indicators for judging environmental investments, such as the introduction of renewable energy

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan.

To achieve our 2030 emission reduction target, we are promoting the conversion to renewable energy through the purchase of non-fossil certificates.
At the same time, we are considering the introduction of other means of conversion to renewable energy. In doing so, setting the non-fossil certificate price as a baseline as an internal carbon price, we use it to determine whether to introduce a renewable energy means by quantitatively measuring the reduction in non-fossil certificate cost, due to the introduction of that renewable energy means as a benefit of the introduction of that renewable energy means.

C12. Engagement

C12.1

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

Yes, our suppliers

Yes, other partners in the value chain

C12.1a

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

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Facilitate adoption of a unified climate transition approach with suppliers

% of suppliers by number

15

% total procurement spend (direct and indirect)

83

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

82

Rationale for the coverage of your engagement

Of the Scope 3 emissions, Category 1 accounts for the majority, more than 80%, and therefore raw material suppliers are targeted for our engagement. In FY2022, we sent a request for cooperation in a survey on initiatives toward carbon neutrality to 55 of our major suppliers to encourage them to change their behavior. Since these 55 companies account for more than 80% of our total raw material purchases, we consider them our major suppliers and target them for our engagement.

Impact of engagement, including measures of success

[Measures of success]

The measure of success from this engagement activity is a reduction in the number of low-scoring companies (multi-year evaluation).

[Results]

・ Since the number of low-scoring companies* decreased from nine in 2020 (equivalent to 7% of purchases) to three in 2021 (equivalent to 2% of purchases), we consider this activity a success. (The number of companies with no problems with the results of the initiative evaluation was 52 (equivalent to 88% of purchases).)

・ In 2022, we discussed improvements with the three companies that scored low in the

previous year's evaluation (equivalent to 2% of purchases) in order to improve their scores.
* Low-scoring companies: Companies scoring less than 70%
・ Through this engagement activity, we aim to encourage suppliers to strengthen their climate change initiatives and create a foundation for future activities, including logistics improvement and cooperative development of products using biomass and other eco-friendly products.

Comment

C12.1d

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

Partner name: The Assessing low-Carbon Transition (ACT) Initiative
Partner summary: ACT Initiative is an initiative co-founded by CDP, an international environmental NGO, and ADEME, the French Agency for Environment and Energy Management, to develop an ACT methodology to assess the strategic alignment of low-carbon corporate ambitions.
Summary of collaboration: Our members have participated in the Assessing low-Carbon Transition (ACT) Initiative's Chemical Technical Working Group and subsequent load testing, contributing over multiple years to the development of the ACT methodology to assess the strategic alignment with companies' low-carbon transition. The Technical Working Group has an advisory role, and final decisions on the methodology will be made by the current ACT Board members, CDP, and ADEME. The methodology developed in this project will be made available free of charge to all stakeholders with the aim of supporting alignment with the goals of the Paris Agreement.
Details of collaboration:
Situation: As an example of our climate-related decisions, in July 2020, the ESG Committee, chaired by the President (then President and CEO), identified six items of materiality and decided to set "Climate Change" as the top priority item. We decided to participate in this initiative in order to acquire the knowledge necessary to formulate climate-related strategies and other matters.
(Task) After participating in a CDP webinar and confirming the details with the ACT Secretariat, we applied and were accepted to participate in the ACT Chemical Technical Working Group.
(Action) We attended a three-hour meeting of the ACT Chemical Technical Working Group monthly from February to July 2021, and participated in discussions on the ACT methodology under development from the perspective of a company in the chemical sector.
We also took part in the load testing from October 2021 to April 2022, contributing to the establishment of the ACT methodology in the chemical sector.
(Result) We have been using the information gained from the ACT methodology in the chemical sector for our emissions reduction targets since FY2022. Additionally, we have contributed to the climate transition of society as a whole by giving lectures on the ACT methodology at events hosted by Codo Advisory, Inc., the first ACT consulting firm in Japan.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

Yes, suppliers have to meet climate-related requirements, but they are not included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement

Complying with regulatory requirements

Description of this climate related requirement

We ask our suppliers to complete a sustainability questionnaire to encourage them to comply with climate change-related laws and regulations, and to carry out greenhouse gas (GHG) emissions reduction activities.

% suppliers by procurement spend that have to comply with this climate-related requirement

80

% suppliers by procurement spend in compliance with this climate-related requirement

80

Mechanisms for monitoring compliance with this climate-related requirement

Supplier self-assessment

Response to supplier non-compliance with this climate-related requirement

Retain and engage

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

Support for the Task force on Climate-Related Financial Disclosures (TCFD) Recommendations_Nippon Paint Holdings.pdf

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

Nippon Paint Group expressed its support for the recommendations (final report) of the Task force on Climate-related Financial Disclosures (TCFD) in September 2021. Aiming to achieve Maximization of Shareholder Value (MSV), we are working to enhance our climate change-related measures and information disclosure. To accelerate our response to climate change, we will globally engage in emissions reduction activities in line with the net-zero targets and carbon neutrality declarations set by national governments, and contribute to the achievement of net-zero emissions in each region where we operate. Specifically, we will focus on reducing emissions per intensity unit also in emerging countries where the market is expanding, by introducing renewable energy sources and replacing existing equipment with energy-efficient and electrified equipment. We will also consider targets for the introduction of renewable energy sources (power generation targets). For Scope 3 emissions, we are conducting calculations domestically and have begun conducting calculations globally.

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Japan Chemical Industry Association

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position.

We support the goals and initiatives of the association, and, as a leading company in the paint industry, we are working together to ensure that the initiatives make progress.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

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

Publication

In mainstream reports

Status

Complete

Attach the document

20230329ir02_Annual Securities Report for the Fiscal Year Ended December 31, 2022.pdf

Page/Section reference

Annual Securities Report for the Fiscal Year Ended December 31, 2022 (page 26)

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

(7) Risks related to climate change

① Long-term risks

Nippon Paint Group may be physically affected by geographically widespread natural disasters and extreme weather events, including in parts of Asia. In light of domestic and international policies and regulations on climate change and market requirements, we have set targets for reducing greenhouse gas emissions from production processes, etc., and are taking concrete steps to reduce emissions in addition to developing and introducing eco-friendly products. However, the Group's business may be affected by the tightening of these regulations in line with the Japanese government's policy of creating a decarbonized society, and global trends, including automakers targeting for significant reductions in greenhouse gas emissions from their production processes and other activities.

Specifically, the financial position and operating results of the Group may be adversely affected in the event of new taxes on greenhouse gas emissions and/or higher-than-expected costs associated with the procurement of renewable energy.

② Short-term risks

The Group's products are used in a wide range of fields, including automobiles, buildings, construction materials, structures, metal products, electrical machinery, and ships. If the Group or its supply chain were to suffer extensive damage from typhoons, torrential rains, or other extreme weather events, which have been increasing in recent years due to climate change, production or shipments could be suspended for an extended period of time until restoration.

In addition, the industries to which companies in the Group supply products may be affected by extreme weather events due to cool summers, warm winters, long rainy seasons, etc. In such cases, the Group's financial position and operating results may be adversely affected.

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment.
Row 1	Task Force on Climate-related Financial Disclosures (TCFD) Other, please specify Participation in the Technical Working Group in the chemical sector of ACT Initiative	・ Nippon Paint Group expressed its support for the recommendations (final report) of the Task force on Climate-related Financial Disclosures (TCFD) in September 2021. Aiming to achieve Maximization of Shareholder Value (MSV), we are working to enhance our climate change-related measures and information disclosure. ・ We attended a three-hour meeting of the ACT Chemical Technical Working Group monthly from February to July 2021, and participated in discussions on the ACT methodology under

		development from the perspective of a company in the chemical sector. We also took part in the load testing from October 2021 to April 2022, contributing to the establishment of the ACT methodology in the chemical sector.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, both board-level oversight and executive management-level responsibility	Our considerations for biodiversity include activities that contribute to minimizing the effects of climate change as well as activities conducted as initiatives in “Resources and Environment,” which is an item of materiality. Specifically, we recognize that we must control the impact on aquatic life through appropriate water usage and proper wastewater treatment, and prevent air, soil, and water pollution through appropriate chemical substance management, thereby minimizing the impact of our business activities on humans, organisms, and plants. In addition, our plants are working to ensure that local biodiversity is not compromised by continuously securing green space in accordance with the green space conservation act, thereby providing places for insects and birds to survive. The Board of Directors oversees strategies, policies, and issues on biodiversity-related and other environmental challenges, as well as relevant targets and progress, by receiving reports approximately four times a year from the Directors, Representative Executive Officers & Co-Presidents, who receive reports directly from the Global Teams, and through the Audit Committee and other committees.

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity

Row 1	No, but we plan to do so within the next 2 years

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

No, but we plan to within the next two years

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

No, but we plan to within the next two years

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity-sensitive areas in the reporting year?

No

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water management Education & awareness Law & policy

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No, we do not use indicators, but plan to within the next two years	

C15.7

(C15.7) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications		The "Prevention of air and water pollution" section of the attached PDF "IntegratedReport_2022_jp (Water)" describes the management of water and chemical substances that leads to the securement of biodiversity. [1]

[1] IntegratedReport_2022_jp(Water).pdf

C16. 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.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Officer and General Manager, Sustainability	Environment/Sustainability manager

Submit your response

In which language are you submitting your response?

Japanese

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms