CDP Climate Change 2023 Questionnaire

C0 Introduction

C0.1

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

The Group is centered on the Obayashi Corporation, Japan's biggest construction companies, and consists of 108 subsidiaries and 27 affiliated companies, with about 1.98 trillion yen in total sales and 15,800 employees. Since its founding by Yoshigoro Obayashi in Osaka in 1892 and until today, the Group has engaged in numerous major projects in Japan and abroad, building on its DNA of "an attitude of sincere manufacturing" and "technological power." Using technologies and know-how, we have expanded our business activities in recent years. In addition to our core construction business, we have ventured into new areas such as real estate development and renewable energy projects. We are committed to actively contributing to the realization of a low-carbon society.

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

From: [01/04/2022]

End date

To: [31/03/2023]

Indicate if you are providing emissions data for past reporting years

No

C0.3

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

Australia
Bangladesh
Cambodia
Indonesia
Japan
Malaysia
Myanmar
Singapore

Taiwan, China
Thailand
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland (UK)
United States of America
Vietnam

C0.4

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

JPY

C0.5

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

Financial management

C-C N0.7/C-RE0.7

(C-CN0.7/C-RE0.7) Which real estate and/or construction activities does your organization engage in?

Construction of new buildings or extensive renovations
Please provide specifics on other real estate or construction activities
New frontier projects such as civil engineering, development projects, renewable energy, etc.

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, we have an ISIN code.	JP3190000004

C1 Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
President	At the Obayashi Corporation, the Board of Directors, which comprises all directors, oversees climate-related risks and opportunities as a priority matter for our businesses. The President and CEO (hereafter "President"), who is a member of the Board of Directors and also serves as the Chairman of the Sustainability Committee established under the Board of Directors, has the highest responsibility for climate-related issues. The Obayashi Corporation major policies, measures, and organizations that refer to climate-related issues for which the President, as the highest-ranking officer, is responsible are as follows: ・Basic Principles and Environmental Policy of the Obayashi Corporation The Basic Principles of the Obayashi Corporation are based on the spirit of the Three Pledges (Quality, Value, and Efficiency) that go back to the founding of the company. Our Corporate Philosophy defines our social mission, and our Code of Conduct stipulates guidelines for achieving that. As a leading sustainability company, our Corporate Philosophy commits that we "care for the global environment and create solutions to social challenges as a good corporate citizen." The Code of Conduct promotes "fostering an environmentally responsible society" to "fulfill our social mission." Additionally, in the Obayashi Corporation Environmental Policy, the company's president declares that "the Obayashi Corporation will engage in independent initiatives to address environmental issues as a good corporate citizen that cares for the global environment, promote continuous improvement as a key task in our businesses, and envision an ideal future society through all our business activities, thereby contributing to building a sustainable society." In April 2023, the Obayashi Corporation Environmental Policy was revised to the Obayashi Group Environmental Policy. ・Obayashi Sustainability Vision 2050 Obayashi's Expert Committee, chaired by the President and composed of outside experts and several the Obayashi Corporation executives, will study the issue and incorporate contributions to the achievement of ESG and SDGs as a management foundation and social issue by grasping social trends and changes in the business environment surrounding the Obayashi Group. The objective in so doing is to simultaneously pursue sustainability for the "Earth, society and people" as well as that of the entire the Obayashi Group. For this purpose, the Obayashi Green Vision 2050, formulated in 2011, was updated to the Obayashi Sustainability Vision 2050 in June 2019. The said Vision defines our vision for 2050 and sets targets for 2040–2050, including decarbonization, to realize the ideal state. ・Medium-Term Business Plan 2022 In March 2022, the Obayashi Group, taking into account the changing global social landscape, market trends in its core domestic construction business, and an

	analysis of the causes behind the unmet goals of the 2017 Medium-Term Business Plan, formulated a new 5-year management plan titled "Obayashi Group Medium-Term Business Plan 2022," commencing in the fiscal year 2022. The new Medium-Term Business Plan focuses on three fundamental pillars: 1) strengthening and deepening the foundation of the construction business, 2) innovation in technology and business, and 3) expanding the business portfolio for sustainable growth. Notably, in the area of technology and business innovation, the plan aims to create new customer value by harnessing "Carbon Neutrality" and "Well-being (safety, security, comfort, health)" as business opportunities. As part of the plan's performance metrics, they have set non-financial indicators and targets related to the E (Environment) of ESG, including "Reduction of greenhouse gas emissions" with goals like "Achieve a 46.2% reduction in CO2 emissions (scope 1, 2) by 2030 compared to 2019 levels" and "Commit to SBT and aim for Carbon Neutrality by 2050." ・The Board of Directors The Obayashi Corporation has established a Board of Directors composed of all directors, including the President. The Board of Directors meets approximately 15 times a year and oversees climate-related risks and opportunities. In March 2022, they developed the 2022 Medium-Term Business Plan and set new greenhouse gas emission reduction targets, which align with SBT targets and obtained SBT certification in October 2022. ・Sustainability Committee As of April 1, 2022, the Obayashi Corporation established a Sustainability Committee consisting of the president as the chairman, three directors, and two outside directors, a group of five members, as an advisory body to the board of directors. This committee convenes at least twice a year. It engages in activities such as identifying sustainability issues, including climate-related concerns, reviewing response strategies, making recommendations to the board of directors, and evaluating the implementation of the actions.

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
Some meetings (planned)	●Reviewing and guiding annual budgets ●Overseeing major capital expenditures	The following are the meetings in the Obayashi Corporation where climate-related matters are on the agenda and which are attended by officers including the chief executive Representative Director and President and/or the executive officer responsible for the environment. ・Board of Directors The Obayashi Corporation has a "Board of Directors" comprising all directors. The board meets 15 times a

	●Overseeing acquisitions, mergers, and divestitures ●Reviewing innovation/R&D priorities ●Overseeing and guiding employee incentives ●Reviewing and guiding strategy ●Overseeing and guiding the development of a transition plan ●Monitoring the implementation of a transition plan ●Overseeing and guiding on scenario analysis ●Overseeing corporate goal setting ●Monitoring progress toward corporate goals ●Overseeing and guiding public policy collaboration ●Overseeing value chain engagement ●Reviewing risk management process	year and oversees climate-related risks and opportunities. ・Sustainable Committee On April 1, 2022, the Obayashi Corporation established a Sustainability Committee, consisting of a total of five members, with the President serving as the Chairman and three Directors, along with two external Directors, as advisory members. This committee convenes at least twice a year to deliberate on sustainability issues, including climate-related concerns, and provides recommendations to the Board of Directors. It also evaluates the implementation status in the execution of these policies.

C1.1d

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

	Board member(s) have insight into climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues

Row1	Yes	The Obayashi Corporation has been operating an environmental management system compliant with ISO14001 since 1999, encompassing all its branches and organizations, with a primary focus on civil engineering and construction activities. This system includes setting environmental goals and addressing climate-related issues such as reducing CO2 emissions and waste. Moreover, they have enhanced their seismic and fire-resistant technology through their long-standing experience and expertise, offering resilient buildings and social infrastructure that can withstand disasters. Since 2011, they have also ventured into renewable energy business, contributing to the creation of a low-carbon society by supplying green energy. When selecting directors, our company evaluates their rich experience and expertise in corporate management and within our business sectors as one of the criteria. The extensive experience in our civil engineering and construction, as well as the renewable energy sector, is considered sufficient in assessing the directors' capacity to address climate-related issues. The President, who has held the position of Business Innovation Department Head since 2011 and Technology Business Creation Division Head since 2014, possesses substantial experience in addressing climate-related issues, particularly in promoting renewable energy business. With this background, the President leads both the Board of Directors (oversight of climate-related risks and opportunities) and the Sustainability Committee (evaluation of sustainability issue response strategies, recommendations to the Board of Directors, and monitoring of implementation).

C1.2

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

President

Responsibility for Climate-Related Matters

Managing annual budgets for climate mitigation activities
Capital expenditures and operational expenses related to low-carbon products/services (including research and development)
Overseeing climate-related acquisitions, mergers, and divestitures
Providing incentives to employees associated with climate issues
Developing climate transition plans
Executing climate transition plans
Integrating climate-related issues into business strategies
Implementing climate-related scenario analysis
Establishing corporate climate goals

Monitoring the progress of corporate climate goals
Managing public policy collaborations that may impact the climate
Managing value chain collaborations related to climate issues
Evaluating climate-related risks and opportunities
Managing climate-related risks and opportunities

Areas of Responsibility

Reporting line
Direct reporting to the Board of Directors

Frequency of reporting climate-related issues to the Board of Directors through this reporting line
More frequently than quarterly

Explanation
The President has the highest responsibility for climate-related issues in the Obayashi Corporation.
The organizations related to climate-related issues in which the President is involved and their roles and responsibilities are as follows

・Members of the Board of Directors
The Obayashi Corporation has established a board of directors composed of all directors, including the president. The board of directors meets approximately 15 times yearly and oversees climate-related risks and opportunities.

・Chairperson of the Sustainability Committee
As of April 1, 2022, the Obayashi Corporation established a Sustainability Committee consisting of the president as the chairman, three directors, and two outside directors, a group of five members, as an advisory body to the board of directors. This committee convenes at least twice a year. It engages in activities such as identifying sustainability issues, including climate-related concerns, reviewing response strategies, making recommendations to the board of directors, and evaluating the implementation of the actions.

・Chairperson of the Management Meeting
At the Obayashi Corporation, a 'Management Meeting' has been established to ensure detailed and prompt decision-making. This meeting is chaired by the President and consists of 11 members selected from the Board of Directors and executive officers. The 'Management Meeting' convenes approximately 30 times a year and addresses important matters related to sustainability issues, including climate-related concerns, through reporting, deliberation, instructions, and resolutions.
Additionally, as a subsidiary body of the 'Management Meeting,' the 'Management Planning Committee' has been established. Furthermore, several specialized committees have been set up under this committee to promote specific initiatives related to sustainability matters, such as the 'Environmental Management Specialized Committee.'

The 'Management Planning Committee,' chaired by the executive officer responsible for management planning, convenes at least 12 times a year. It formulates execution policies and conducts monitoring and reviews of the progress regarding sustainability issues, including climate-related matters.
Furthermore, the 'Environmental Management Specialized Committee,' chaired by the executive officer responsible for environmental management, holds meetings at least twice a year. It focuses on formulating strategies and policies related to environmental management, aligning with the Obayashi Corporation's environmental management system. This includes reviewing and promoting measures and implementation plans based on collected environmental data, setting goals, and monitoring and reviewing the progress and achievements.
The results of monitoring, such as CO2 emissions based on the reports and information presented in the 'Environmental Management Specialized Committee,' are reported in the 'Management Planning Committee' and the 'Management Meeting.

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
Row1	Yes	The Obayashi Corporation offers incentives to manage climate-related issues. These incentives are available to all employees and the executive officer responsible for the environment. The Obayashi Corporation offers incentives to the President, internal directors, executive officers, including the officer responsible for environmental matters, and all employees for their contributions to climate-related issue management.

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

Director

Type of incentive

Monetary reward

Incentive

Stock

Performance indicators

KPIs for the Climate Transition Plan

Associated Incentive Plan
Long-Term Incentive Plan

Additional Information about Incentives
The internal directors, including the President, are granted performance-linked stock rewards aimed at enhancing their commitment to improving medium to long-term performance and increasing corporate value and shareholder value. These rewards vary based on their respective responsibilities and the achievement of predefined performance indicators. Among these rewards, the 'Medium to Long-term Performance-Linked Stock Rewards,' awarded based on the achievement of medium to long-term performance indicators, are also linked to corporate performance related to sustainability indicators.

Please explain how incentives contribute to your commitment to climate and/or the execution of climate transition plans.
By adopting a 'medium to long-term performance-linked stock compensation' tied to climate-related sustainability indicators and corporate performance, it enhances the awareness of the internal directors, including the President, contributing to the improvement of medium to long-term performance and the increase in corporate value and shareholder value.

Entitled to incentive

Other Executive Officers

Type of incentive
Monetary reward

Incentive
Stock

Performance indicators
KPIs for the Climate Transition Plan

Associated Incentive Plan
Short-Term Incentive Plan

Additional Information about Incentives
Executive officers, including the Chief Environmental Officer, are granted performance-linked stock rewards aimed at enhancing their commitment to improving medium to long-term performance and increasing corporate value and shareholder value. These rewards vary based on their respective responsibilities and the achievement of predefined performance indicators. Among these rewards, the 'Medium to Long-term Performance-Linked Stock Rewards,' awarded based on the achievement of medium to long-term performance indicators, are also linked to corporate performance related to sustainability indicators.

Provide further details on the incentives offered for the management of climate-related issues.

By adopting a 'medium to long-term performance-linked stock compensation' tied to climate-related sustainability indicators and corporate performance, it enhances the awareness of the Executive officers, including the Chief Environmental Officer contributing to the improvement of medium to long-term performance and the increase in corporate value and shareholder value.

Entitled to incentive

All employees

Type of incentive

Monetary reward

Incentive

Bonus - % of salary

Performance indicator

Implementation of emissions reduction initiatives
Reduction of total energy consumption

Associated Incentive Plan

Short-Term Incentive Plan

Additional Information about Incentives

The Obayashi Group has an "environmental award" system that acknowledges exceptional accomplishments and exemplary initiatives within three key environmental categories: low carbon, circular economy, and coexistence with nature. The "environmental award" evaluation criteria encompass environmental impacts, such as reductions in greenhouse gas emissions and enhancements in energy efficiency. The awardee is presented with a certificate, prize money, or item.

Provide further details on the incentives offered for the management of climate-related issues.

The "environmental award" system enhances awareness of the Obayashi Group environmental initiatives and, as a result, contributes to the Obayashi Group efforts and actions related to climate change and climate change mitigation.

Entitled to incentive

All employees

Type of incentive

Monetary reward

Incentive

Salary increase

Performance indicator

Implementation of emissions reduction initiatives
Reduction of total energy consumption

Associated Incentive Plan
Short-Term Incentive Plan

Additional Information about Incentives
One of the evaluation criteria in the personnel performance assessment is the 'Execution of Environmentally Friendly Tasks,' and there is a mechanism where employees' efforts are reflected in their bonuses and salaries. 'Environmentally Friendly Tasks' include activities related to reducing CO2 emissions in the design and construction phases, which are environmental objectives in the Obayashi Corporation's EMS.

Provide further details on the incentives offered for the management of climate-related issues.
The performance evaluation criteria in personnel assessments include the 'Execution of Environmentally Friendly Tasks,' which, when reflected in bonuses and salaries, enhances awareness among the Obayashi Corporation employees of environmentally friendly tasks. As a result, this contributes to the Obayashi Corporation's efforts related to climate issues and the promotion of climate change mitigation measures.

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?

Time horizon	From (years)	To (years)	Comment
Short-term	0	1	
Medium-term	1	3	
Long-term	3	30	

C2.1b

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

Substantive financial or strategic impact is defined as follows. The evaluation criteria for importance/impact are impact in case of occurrence, risk of occurrence in the short, medium, and long terms (frequency), impact on consolidated operating income as an indicator of financial impact, and qualitative evaluation of consistency with the Obayashi Group's Basic Principles, business activities, and business strategy. Rising construction costs in our

construction business, which is our core business and accounts for more than 90% of net sales, is tantamount to rising cost of goods sold, which has a negative impact on consolidated operating income. Changes in consolidated operating income are an element that causes a considerable financial impact when we identify and assess risks and opportunities. Moreover, our consolidated operating income was 93.8 billion yen as of March 2023, but fluctuations in domestic construction demand are having a short-term impact on our building construction business and a medium- to long-term impact on our civil engineering business.

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

The Obayashi Group employs a comprehensive and company-wide approach to identify, assess, and manage climate-related issues, as part of its overall risk and opportunity management processes.
Within the Obayashi Group, specialized committees in various sustainability fields, established under the "Management Planning Committee" commissioned by the President, work under the guidance of the President. They are responsible for formulating specific strategies, promoting initiatives, and monitoring their implementation, with a structure for consultation with the "Board of Directors." These specialized committees operate under the short-term (0 to 1 year), medium-term (1 to 3 years), and long-term (3 to 30 years) perspectives, examining the impact on the entire group and the entire value chain, including suppliers and customers, as well as determining the materiality the company should address. They identify and assess risks and opportunities from a comprehensive standpoint. Environmental risks and opportunities, including climate-related issues, are managed by the "Environmental Management Committee," one of the specialized committees.

For risks and opportunities extending from the short-term to the medium and long term, affecting the entire group and the entire value chain, the ESG specialist department extracts 22 "ESG issues" from 300 issues related to ESG fields. These issues are evaluated based on the stakeholders' interest and the two axes of significance and impact on the Obayashi Group's business strategy and financial aspects. They prioritize the issues, taking into consideration alignment with the Obayashi Group's fundamental principles and business strategies. One of the ESG materialities identified is "Building a Society with Environmental Consideration." The "Management Planning Committee" annually incorporates ESG issue (materiality) action plans and KPIs (key performance indicators), including those related to climate-related risks and opportunities, into the management plan for addressing challenges. The ESG specialist department conducts bi-annual performance reviews and annual detailed analyses based on each department's achievement of numerical targets. The "Management Planning Committee" establishes and reviews the execution policy and progress for sustainability issues, including climate-related problems, based on these results.

[Processes for identifying and evaluating climate-related risks and opportunities]

Regarding the methods for identifying and evaluating climate-related risks and opportunities, similar to the risks and opportunities across the entire value chain mentioned above, the Obayashi Group identifies and assesses the materiality of risks and opportunities based on definitions and indicators that have a significant impact. It then proceeds to implement risk response measures and prioritize them.

The assessment criteria include the severity of the impact if they occur, the likelihood of events occurring in the short, medium, and long term (frequency of occurrence), the impact on consolidated operating profit as defined for significant financial impact, and qualitative evaluations of importance and impact, such as alignment with the Obayashi Group's fundamental principles, business activities, and business strategies. These serve as the criteria for judging importance and impact.

For long-term risks and opportunities extending beyond three years up to 2050, "Obayashi Sustainability Vision 2050," revised and announced on June 24, 2019, captures various societal trends and changes in the business environment surrounding the Obayashi Group. It involves a review conducted by top management and external experts. Furthermore, an examination of the necessity for setting goals for the years 2040 to 2050 and a review of the Vision are carried out for the intermediate target years 2030 and 2040. In addition, in accordance with the recommendations of the TCFD, scenario analysis was performed for the four major domestic businesses for the year 2030. This was to understand the medium to long-term impact of climate-related issues on the business and to identify and assess risks and opportunities.

[Processes for responding to climate-related risks and opportunities]
<Climate-Related Risk and Opportunity Response Process>

In terms of addressing climate-related risks and opportunities, the prioritization and response are conducted in accordance with the results of the <Climate-Related Risk and Opportunity Identification and Assessment Process> mentioned above. For identified risks and opportunities that require action, priority is set and responses are implemented as follows. Furthermore, these are incorporated, considering the financial impact, into the medium-term business plans developed every 3 to 5 years.Each responding department individually formulates a detailed action plan based on the determined response measures. These response measures are translated into specific

initiatives, and progress reports, along with action plans and KPIs, are presented at meetings held at least once a year during the "Management Planning Committee."

・For issues where the importance, impact, and response status within the Obayashi Group are high, and stakeholder interest and the response status of other companies are also high:
<Risk> Addressed through control measures. <Opportunity> Prioritized to enhance competitiveness and addressed.
・For issues where the importance, impact, and response status within the Obayashi Group are high, but stakeholder interest and the response status of other companies are low:
<Risk> Addressed through mitigation measures. <Opportunity> Measures are taken to highlight significance and communicate importance.
・For issues where the importance, impact, and response status within the Obayashi Group are low, but stakeholder interest and the response status of other companies are high:
<Risk> Addressed through transfer measures. <Opportunity> Measures and initiatives are developed and implemented in response.
・For issues where the importance, impact, and response status within the Obayashi Group are low, and stakeholder interest and the response status of other companies are also low:
<Risk> Addressed through acceptance measures. <Opportunity> Continual monitoring of trends and identification of opportunities are conducted in response.

C2.2a

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

Risk type	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Since approximately 50% of the Obayashi Corporation's construction project orders (design and construction ratio for the 2022 fiscal year: 51%) are design and construction projects, the expansion of current regulations (such as the Building Energy Efficiency Law) and the increase in regulatory standards pose a short-term risk. These regulations could lead to the loss of opportunities for design and construction projects if the Obayashi Group's energy-efficient design technology level decreases due to a lack of accumulated know-how through new technology development, reducing the ability to propose solutions. These short-term risks are considered to be relevant and are continually included in the company's risk assessment. The company's Environmental Affairs Division identifies such risks every six months and reflects them through reviews of environmental management focus measures and adjustments to target levels during biannual meetings of the Environmental Management Specialist Committee. The revised Building Energy Efficiency Law, which took effect in April 2021,

		expanded the scope of "energy-saving standards compliance obligations" from large buildings over 2,000 square meters to medium-sized buildings over 300 square meters. Furthermore, a legal amendment in June 2022 mandated "energy-saving compliance obligations" for all new residential and non-residential buildings within three years. If the Obayashi Group does not develop and expand new low-CO2 emission construction and services, opportunities for contract awards using the design and construction method, which utilizes the Obayashi Group technical and management capabilities contributing to CO2 emission reductions, may decrease, ultimately affecting sales and revenue. Additionally, various issues such as inadequate energy-efficient design technology, delays in new technology development, and a lack of accumulated know-how or a decrease in the ability to propose solutions may lead to the loss of opportunities for design and construction projects at the Obayashi Group.
Emerging regulation	Relevant, always included	New regulations, such as the introduction of a comprehensive "carbon tax" in Japan, are recognized as a medium-term risk due to the fact that the Obayashi Group's Scope 1 emissions are particularly large. This is because the transfer of costs to raw materials and other factors could lead to an increase in construction costs. These risks are considered relevant and are consistently included. To address these concerns, the Obayashi Group conducts detailed analyses approximately every three years, in line with the new greenhouse gas reduction targets set in March 2022 (2030 target). Every three to five years, during the formulation of the medium-term business plan, the Obayashi Group reassesses its understanding of the business environment and revises its strategic management plans and the seven initiatives (action plans) for CO2 emissions reduction. There is a risk that the introduction of future "carbon taxes" and similar measures may result in increased construction costs for raw materials, potentially affecting sales and revenue.
Technology	Relevant, always included	Technological influences, such as developments in new technologies related to renewable energy, and advancements in Zero Energy Building (ZEB) design, may lead to increased competition from new market entrants and heightened technological competition. This can result from the Japanese government's infrastructure development policies for renewable energy sources like solar power, offshore wind power, geothermal energy, biomass, and hydrogen, as well as the development of low-cost and high-performance ZEB technologies. These factors may lead to the obsolescence of the Obayashi Group existing technologies, ultimately diminishing its overall competitiveness in the contracting industry. Therefore, this is recognized as a medium-term risk with a timeframe of 1 to 3 years, and it is considered relevant and consistently included in our assessments. To address these concerns, the Obayashi Group conducts detailed analyses approximately every three years, in line with the new greenhouse gas

		reduction targets set in March 2022 (2030 target). Every three to five years, during the formulation of the medium-term business plan, the Obayashi Group reassesses its understanding of the business environment and revises its strategic management plans and the seven initiatives (action plans) for CO2 emissions reduction. There is a risk that changing technology trends could lead to the erosion of the Obayashi Group competitive advantage in terms of its technological capabilities in the contracting industry.
Legal	Relevant, always included	With regard to legal risk, in the event that a construction project constructed by the Obayashi Group does not meet the performance requirements for their buildings and the client's equipment, the company may be sued for breach of contract in the medium to long term, regardless of whether it is the fault of the Obayashi Group, and there is a risk of litigation over who is to blame and the percentage of responsibility. In addition, we recognize that the risk of climate change-related lawsuits is increasing. Clients and customers are likely to increasingly demand compliance with CO2 emission reductions at the construction stage as well as performance guarantees for energy-creating and energy-saving equipment and devices that are expected to reduce CO2 emissions during the operation of the building as a condition for ordering new construction and renovation work. We recognize these litigation risks as medium- and long-term risks that are relevant and always included.
Market	Relevant, always included	The background to market risk lies in Japan's government's Green Growth Strategy aimed at achieving carbon neutrality by 2050. As outlined in the roadmap, the strategy includes achieving "average ZEH/ZEB realization in new homes and buildings by 2030," which has increased the market demand for building ZEB (Zero Energy Building) technology. On the other hand, facilities that enhance environmental performance, such as ZEB technology, have the potential to significantly increase construction costs. Therefore, there is an urgent need for technology development to enhance performance while reducing costs. the Obayashi Group perceives the expansion of the need for "energy-efficient and renewable energy technologies" as a business opportunity based on scenario analysis in line with TCFD recommendations. To realize performance and comfort in its projects, the group is promoting the development and practical application of ZEB technology and other innovations. The construction market, including environmental technology, is expected to face tough competition and price competition in the medium to long term. Consequently, market risk related to climate change is considered a constant and highly relevant medium to long-term risk.In the previous fiscal year, the Obayashi Group invested approximately 15.3 billion yen in research and development costs, including ZEB technology. While customers demand high-quality, high-performance, and cost-effective buildings, there is a risk that if competitors propose lower-cost ZEB

		solutions, the increased development costs might not be recovered, and revenue may not increase. Additionally, intensified price competition could pose a risk, as even high-value buildings might not lead to increased profits.
Reputation	Relevant, always included	Reputation risk includes external evaluations of climate change initiatives, such as CDP assessments, evaluations of efforts related to ESG practices, and assessments of climate-related information disclosure in accordance with TCFD recommendations. For certain environmental policies, there is a risk that a decrease in external evaluations may lead to increased financing costs. This risk is already emerging and is considered relevant and consistently included in our assessments. To address these concerns, the Environmental Division identifies them every six months and revisits the focus of environmental management in biannual meetings of the Environmental Management Committee. The outcomes of these discussions are reported to the Management Planning Committee and the Executive Committee, which are the highest decision-making bodies regarding the execution of environmental policies. For instance, a potential increase in financing costs due to a decline in external evaluations is included in the assessment because of its relevance.
Acute physical risk	Relevant, always included	Acute physical risks, such as an increase in severe weather events like typhoons, pose a short-term risk that is already emerging due to the potential impact on the Obayashi Group's business locations and construction sites across Japan. These risks have the potential to cause delays in project schedules. As such, they are considered relevant and consistently included in our assessments. The ESG Division identifies these risks every six months and reports them to the Management Planning Committee and the Executive Committee, the highest decision-making bodies responsible for risk management. The decisions made are reflected in the revision of risk management focus areas. The increase in 'severe weather events like typhoons' is a potential cause of project delays, particularly in western Japan, where the Obayashi Group has many important clients. In recent years, it has also become a nationwide concern.
Chronic physical risk	Relevant, always included	Chronic physical impacts, such as an increase in 'high-temperature days,' already pose a short-term risk as they create harsh working conditions for employees and skilled laborers on construction sites. The deterioration of working conditions can lead to decreased work efficiency and increased labor costs. As such, they are considered relevant and consistently included in our assessments. the Obayashi Group's Safety Division reports data on heatstroke incidents monitored monthly, and the Environmental Division compiles environmental data every six months for reporting. These concerns are reflected in the revision of environmental management focus areas during the semiannual meetings of the Environmental Management Committee.

		The discussion points are also reported to the Management Planning Committee and the Executive Committee, which are the highest decision-making bodies responsible for the execution of environmental policies. The worsening working conditions leading to decreased work efficiency and increased labor costs are included in our evaluation due to their relevance

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.

ID

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type and Primary climate-related risk driver

Chronic physical risk

Changing Temperatures (Atmosphere, Freshwater, and Seawater)

Primary potential financial impact

Decreased revenues due to reduced production capacity

Company- specific description

The working environment in the construction industry often involves high temperatures due to factors such as direct sunlight outdoors, lack of air conditioning, poorly ventilated enclosed spaces, and heat generation from materials and machinery. the Obayashi Corporation, with a strong presence in western Japan, especially in Osaka where it was founded, conducts a significant portion of its construction projects in the west of the Kanto region, which accounted for over 80% of heatstroke incidents in the 2022 fiscal year. These regions also represent over 80% of the domestic construction revenue in the same year. The deterioration of working conditions due to rising temperatures can lead to an increase in heatstroke incidents on construction sites. This, in turn, results in decreased work efficiency, more absentee workers, and an increased risk of accidents. Consequently, there is a risk of reduced productivity on construction sites in the west of the Kanto region. In the 2022 fiscal year, within the Obayashi Group, the Obayashi Corporation reported 237 heatstroke incidents (152 in the 2021 fiscal year), with 19 cases of workers needing more than one day off (18 in the 2021 fiscal year). With the

increase in temperatures causing the Wet Bulb Globe Temperature (WBGT) index to exceed safety thresholds, mandatory work interruptions become necessary for a certain duration. This has a financial impact, resulting in a productivity decrease of 15.95 million yen per site, which is considered a strategically significant risk factor, given the definition of substantial financial impact..

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Moderate

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

15,955,200

Potential financial impact figure -minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact figure

If the WGBT (Wet Bulb Globe Temperature) value exceeds the standard threshold on a construction site due to rising temperatures, resulting in an increased risk of heatstroke incidents, it necessitates a temporary work interruption. This has a financial impact, leading to a reduction in site productivity.
Number of heatstroke cases in our company in 2013, the largest number in recent years (277 cases) x 2 days (assumed to be the number of lost workdays per case) x amount equivalent to daily allowance (24,000 yen) = 13,296,000 yen
The number of days of absence from work per case is assumed to be 2 days (estimated based on the Obayashi Corporation's table of heat-related accidents in FY2021).
The amount equivalent to daily wages is assumed to be 24,000 yen (estimated from the 2022 unit labour cost for public works design).
It is assumed that there will be a 20% increase in the number of occurrences due to rising temperatures caused by global warming (estimated from "Climate Change Observation, Prediction and Impact Assessment Integrated Report 2018: Climate Change in Japan and its Impacts" by the Ministry of the Environment, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Agriculture, Forestry and Fisheries, Ministry of Land, Infrastructure and Transport, and Japan Meteorological Agency).
13,296,000 yen × 0.2 = 2,659,200 yen
Increased cost due to workers' absence from work due to heatstroke: 13,296,000 yen + 2,659,200 yen = 15,955,200 yen

Cost of response to risk

1,274,000,000

Description of response and explanation of cost calculation

(Situation) The following three items of our Health and Safety Policy were established based on the basic principle of "valuing everyone we come in contact with in our business."

1. Comply with the Industrial Safety and Health Act, other relevant laws, and the Obayashi Group's internal rules.

2. Appropriately implement and use the Obayashi Group's Occupational Health and Safety Management System.

3. Help improve the independent health and safety management efforts of suppliers.

Under this policy, the President, as the overall responsible person, annually formulates the Central Safety and Health Action Guidelines and establishes priority measures. Each store, based on this, creates its own "Safety and Health Action Guidelines" and implements specific measures. In the "Heatstroke Prevention Measures" as outlined in the Central Safety and Health Action Guidelines, a thorough monitoring of the WBGT (Wet Bulb Globe Temperature) value is emphasized on each individual construction site. The measured values are communicated to the workers to raise awareness about heatstroke. Additionally, if the values exceed the specified threshold or there is a likelihood of exceeding it, measures to ensure adequate ventilation, modification of work tasks, and changes in work locations are implemented as part of preventive measures. This is in compliance with the "Basic Guidelines for Preventing Heatstroke in the Workplace" by the Ministry of Health, Labour and Welfare.

（Challenges） Conventional heatstroke countermeasures have been limited to alerting people to use the WBGT (heat index) as an indicator and encouraging them to drink water, take salt, and take breaks. However, the onset of heatstroke varies from person to person and depends on the work’s nature and location. The challenge has been to comprehensively assess these factors and communicate the dangers individually. It was also hoped that one of the solutions would be to monitor the physical condition of each worker, such as the heart rate of each worker.

（Actions） The Obayashi Group, in collaboration with NTT Communications in February 2015, developed workwear using the functional material "hitoe." This enabled the real-time acquisition of vital data, such as the heart rate of workers on actual construction sites when wearing this attire. In June 2015, they also developed a system called "Heat Index Watcher" that continuously measured the WBGT values (heat stress index) at multiple locations within the construction site and centralized the information in the construction office. By monitoring the measured WBGT values and the heart rates of workers, they conducted verification to predict the risk of heatstroke before it occurred, aiming to reduce the risk.

Starting from the fiscal year 2019, they began full-scale implementation of the "Heat Index Watcher," and in the fiscal year 2022, it was introduced to approximately 200 construction and civil engineering sites in operation throughout Japan. They view this as part of their actions based on the medium-term management plan for 2022, with a goal extending until the fiscal year 2026.

（Results） In July 2019, the "Envital" system, which manages the health of construction site workers and environmental conditions at work locations, was revamped to enhance worker safety management. The system underwent several improvements, including a shift from the conventional shirt-type vital sensors to wristband-type heart rate sensors. The management features were also enhanced, incorporating location data acquisition and the addition of emergency alert functionality, significantly improving convenience and effectiveness. In the fiscal year 2021, the "direct" messenger app was enhanced to allow external stakeholders, including cooperating companies, to receive direct alerts from the Heat Index Watcher system. As a result, in the fiscal year 2022, despite a 0.91°C increase in average summer temperatures compared to the historical average and an 85-case rise in mild cases of heatstroke, they managed to keep the increase in severe heatstroke cases with more than one day of work absence limited to just one case. Starting from the fiscal year 2022, the group company Oak Information Systems added optional features to the Heat Index Watcher, enabling the measurement of environmental parameters such as CO2 levels and wind speed. This led to the development of the "SISMIL" monitoring cloud system, which can be utilized in various locations and seasons beyond construction sites. Already, it has been introduced to approximately 1,000 locations.

The management costs are included in the 2022 fiscal year environmental accounting, comprising indirect costs related to research and development, approximately 1,100 million yen, surveillance and measurement costs of 168 million yen, and environmental damage response provisions and insurance costs of 6 million yen, totaling 1,274 million yen (1,274 million yen).

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Comment

ID

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type and Primary climate-related risk driver

Acute physical risk

Storms (including blizzards, dust storms, sandstorms)

Primary potential financial impact

Increased direct costs

Company- specific description

In the construction business, which is a major operation of the Obayashi Group, sudden typhoons and floods pose significant risks. These risks include landslides on construction sites, occurrences of water and flooding in underground construction sites, damage to structures, infrastructure, materials, and construction equipment, and the potential for project delays.

Between 2017 and 2018, large-scale typhoons occurred in Southeast Asia and various parts of Japan, causing damage at both domestic and international locations. The location with the highest total damage was in the Kansai region of Japan. In December 2020, the Obayashi Group participated as a contractor in the ongoing "Umeda Kita 2nd District Redevelopment Project" in Osaka, which began construction in 2022. The risk impact in the event of typhoon damage is substantial, especially if sudden typhoons or floods occur as physical risks, leading to extended repair costs for storm damage and additional labor costs to recover from potential project delays. This could result in a financial impact of 2,799.6 million yen. This risk factor qualifies as one with a financially significant impact when assessed for specific evaluation under the definition of significant financial impact.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

2,799,600,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact figure

In the event of sudden typhoons or floods, which are physical risks, if their severity increases, there may be a financial impact due to the need for repair costs for storm damage and additional labor costs to recover from project delays. As damage repair costs and project delay recovery costs, these would be as follows:

For the Obayashi Corporation's domestic civil engineering revenue in fiscal year 2022: 3,434 billion yen x 0.2% = 686,800,000 yen (686.8 million yen).

For the Obayashi Corporation's domestic construction revenue in fiscal year 2022: 10,564 billion yen x 0.2% = 2,112,800,000 yen (2,112.8 million yen).

The calculation uses 0.2% to represent the extent of the impact that large-scale natural disasters have on GDP in advanced countries (source: Tokyo Marine & Nichido Global Warming Seminar, "The Role of Finance and Insurance in Climate Change," November 18, 2008).

So, the total for civil engineering damage repair costs and project delay recovery costs is 686.8 million yen + 2,112.8 million yen = 2,799,600,000 yen (2,799.6 million yen).

Cost of response to risk

174,000,000

Description of response and explanation of cost calculation

(Situation, challenges) In the event of the occurrence of physical risks such as sudden typhoons or floods, and if their severity increases, there may be a financial impact due to the need for repair costs for damage caused by severe storms or additional labor costs to recover from project delays resulting from delayed timelines.

(Actions) The Obayashi Group has adopted risk management measures at construction sites through three methods: ① prediction and prevention, ② damage avoidance and minimization, and ③ risk transfer, aiming to reduce risks. These measures are regarded as part of the actions based on their medium-to-long-term business plan until fiscal year 2026.

① Prediction and Prevention (During Normal Times):

For each region and branch, typhoon response headquarters are organized to obtain detailed information from the Japan Meteorological Agency and private data companies regarding typhoons, explosive low-pressure systems, and other weather-related events. For example, when Typhoon No. 14 occurred near the Ogasawara Islands on September 14, 2022, and approached western Japan, the disaster response headquarters received typhoon reports from private data companies from the initial report to subsequent reports. Various risk scenarios were considered based on the proximity and severity of the typhoon, and standby personnel and support teams were designated according to each scenario.

② Damage Avoidance and Minimization (During Typhoon Approach and Aftermath):

On September 16, 2022, at the Kyushu branch's construction site, measures were taken based on predefined checklists to prevent equipment and material scattering. Under the direction of the Kyushu branch's construction department, actions were taken at the construction site based on the aforementioned scenarios, including personnel standby measures. In the event of damage occurring on completed or under-construction properties, the damage situation was reported to the headquarters following designated procedures. Support for properties requiring equipment, materials, or personnel was provided by the designated support teams. After the passage of typhoons and similar events, information regarding the presence of damage and customer-related information was collected and consolidated following established procedures.

③ Risk Transfer:

In standard construction contracts, the fundamental responsibility for significant losses related to natural disasters and geological events rests with the customer (the ordering party). However, supplementary coverage is provided through construction insurance and other insurance arrangements secured by the company, which serves to complement the risk transfer and reduction efforts.

(Results) The physical risk posed by Typhoon No. 14 was addressed through risk management measures of ① prediction and prevention, ② damage avoidance and minimization, and ③ risk transfer, resulting in risk reduction and transfer.
The management costs, included in the 2022 fiscal year environmental accounting, amount to 174 million yen, consisting of "surveillance and measurement costs" at 168 million yen and "environmental damage response provisions and insurance costs" at 6 million yen.

Comment

ID

Risk 3

Where in the value chain does the risk driver occur?

Upstream

Risk type and Primary climate-related risk driver

Emerging regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Company- specific description

In the 2022 fiscal year, the Obayashi Group, which is the second-largest construction company group in Japan in terms of revenue scale, with construction operations accounting for approximately 93% of consolidated revenue. In the construction sector, the group excels in complex construction projects, such as high-rise buildings and deep underground tunnels, making use of advanced technical expertise. These construction sites consume a significant amount of energy during construction. In the 2022 fiscal year, the Obayashi Corporation used approximately 48,000 kiloliters of light oil for construction machinery operation and approximately 96,000 MWh of electricity for welding work on reinforcing steel and structural steel, on-site lighting equipment, and the operation of electric construction machinery. The energy consumption across all the group's operations amounts to 284,000 tons of CO2 emissions in Scope 1 and 46,000 tons in Scope 2, with Scope 1 accounting for approximately 86%. Additionally, major construction materials like steel and cement consume a substantial amount of energy during manufacturing, leading to CO2 emissions of approximately 1.78 million tons in Scope 3, Category 1, for materials procured by the Obayashi Group in the 2022 fiscal year. While there are no definite tax rules for carbon emissions within the Scope and Categories, if a carbon tax were to be imposed, it is anticipated that increased energy procurement and material procurement costs would directly result in increased construction costs. This poses a risk in the construction market, as the ability to pass on these cost increases to clients could impact business performance. As part of the transition risk within the Obayashi Group's supply chain, the introduction of a carbon tax

could lead to increased energy costs and a carbon tax surcharge on major materials, resulting in an increase of approximately 2.11 billion yen in construction costs. This factor qualifies as a risk that would have a financially significant impact when assessed under the definition of significant financial impact.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

2,110,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact figure

As a transition risk in the supply chain, there is a potential increase in construction costs due to the introduction of a carbon tax, leading to a rise in energy costs and a carbon tax surcharge on major materials. The CO2 emissions during the production of key materials used by the Obayashi Group in the 2022 fiscal year, such as steel and cement, amounted to approximately 1.78 million tons of CO2. If the increased construction costs cannot be passed on as part of the raw material costs, it could result in a decrease in construction profit and affect revenue.

The CO2 emissions from the Obayashi Group's energy consumption during construction amounted to around 330,000 tons of CO2, which, when subjected to an additional global warming countermeasure tax of 1,000 yen per ton of CO2, equals 330,000,000 yen (330 million yen). Additionally, the CO2 emissions during the production of steel and cement used by the Obayashi Group in the 2022 fiscal year, approximately 1.78 million tons of CO2, would be subject to a surcharge of 1,000 yen per ton of CO2, totaling 1,780,000,000 yen (1.78 billion yen). The carbon tax, which is an additional charge, would amount to 2,110,000,000 yen (2.11 billion yen) in total, calculated by adding 330 million yen to 1.78 billion yen.

Cost of response to risk

5,787,000,000

Description of response and explanation of cost calculation

(Situation) The Obayashi Group, with its core in the construction industry, has

undertaken activities to reduce CO2 emissions that it can directly implement through its decision-making, such as the low-carbon transformation of its own facilities and low-carbon construction methods.

（Challenges）The Obayashi Corporation has, traditionally, aimed to reduce CO2 emissions by 85% by 2050 compared to the levels in 2013, through the rationalization of construction practices leading to energy reduction and improvements in productivity, as well as innovative solutions at construction sites. In March 2022, the Obayashi Group established new greenhouse gas emission reduction targets for 2030 as part of its commitment to the Science Based Targets initiative (SBT) in alignment with the Paris Agreement. These targets include a 46.2% reduction in SCOPE 1 and 2 emissions compared to the 2019 fiscal year and a 27.5% reduction in SCOPE 3 emissions compared to the 2019 fiscal year. In October 2022, the company obtained certification for these reduction targets.

(Actions) For instance, as an example of technology development contributing to improved productivity, the Obayashi Group has developed the world's first "Energy-Saving Shield Method" in tunnel construction using large-section shield machines. This method allows for high-speed construction while reducing electricity consumption. It has achieved approximately a 25% increase in excavation speed and a 30% reduction in electricity consumption compared to conventional methods.In addition to this, the company has set goals for reducing CO2 emissions through the introduction of LED lighting for temporary site facilities, the adoption of high-efficiency construction machinery, and fuel-efficient operation training. These strategies for reducing CO2 emissions are implemented to mitigate the risk of construction cost increases resulting from changes in input prices.These efforts are aligned with the Obayashi Group's medium-term management plan for the period up to the 2026 fiscal year.

（Results）In the fiscal year 2022, the company achieved a 12.6% reduction compared to the target set for the fiscal year 2019. The management costs, as reported in the environmental accounting of the Obayashi Corporation for the fiscal year 2022, include research and development expenses related to the design stage amounting to 4,687 million yen and indirect expenses related to research and development of 1,100 million yen, totaling 5,787,000,000 yen (5,787 million yen).

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.

ID

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

The Obayashi Group formulated a new "Medium-term Management Plan 2022: Strengthening Business Foundations and Implementing Transformation" on March 11, 2022. One of the management challenges is to promote "innovation in technology and business to turn social issues into new business opportunities." The company aims to leverage its strengths to address societal challenges like "carbon neutrality" by creating new customer value, providing solutions, and acquiring technology. This involves various initiatives such as achieving zero-energy buildings (ZEB), energy-efficient new construction of buildings, improved facility efficiency, and enhanced building insulation performance. They are also actively pursuing simulations with software like "EcoNavi" to determine the most effective energy-saving methods based on client budgets and building information. In addition, the Obayashi Group provides support for "Lifecycle Management (LCM)" solutions, focusing on optimal asset utilization, asset value preservation and improvement, and reducing lifecycle costs. Innovative painting methods like the "Thermal Shade Method," using high solar reflectance paints to reduce surface temperatures of buildings and thus contribute to energy efficiency, are also part of their efforts. The construction of tall wooden buildings using all above-ground structural components (columns, beams, floors, walls) made from wood, known as "Port Plus," significantly reduces environmental impact compared to steel or reinforced concrete structures due to CO2 reduction achieved throughout the entire lifecycle, from material production to construction, demolition, and disposal. The group is also involved in developing wooden temporary site offices and obtaining ZEB certification (netZEB). They are exploring the use of green hydrogen for hydrogen fuel cell power generation. the Obayashi Group recognizes that its accumulated knowledge, solution proposal capabilities, and expertise in various energy-efficient construction techniques and designs have the potential to increase contracting opportunities in ZEB and energy-efficient renovations. By developing and implementing CO2-low emission constructions and services, they anticipate expanding opportunities for the group's design-construction methods, which can leverage their technical and management capabilities, thus increasing revenue by capturing more projects. The financial impact related to "Increased Construction and Service Revenue from Design and Construction" is

estimated at 295.1 billion yen and is considered an "opportunity" according to the definition of significant financial impact.

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)

295,102,500,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact figure

By developing and deploying low-emission construction projects and services, the Obayashi Group anticipates expanding contracting opportunities through design and construction methods that leverage their technical and management capabilities, which contribute to reducing CO2 emissions. This is expected to lead to an increase in revenue due to higher demand for products and services.
The financial impact related to "Increased Construction and Service Revenue from Design and Construction" is estimated to be approximately 295.1 billion yen. It is considered an "opportunity" based on the assumption that annual contract value will increase by 2,810.5 billion yen. This is calculated as follows:
Increase in Construction Design and Construction Value: 281,050,000,000 yen (2,810.5 billion yen) [Calculated as 50% of the 2022 actual construction contract value of 1,124.2 billion yen, representing the proportion achieved through design and construction, and further assuming that 50% of this contributed to the increase in contracts.]
Increase in Design and Other Service Value: 14,052,500,000 yen (140.5 billion yen) [Calculated as 5% of the assumed design fee rate applied to the increase in construction design and construction value.]
The total "Increase in Construction Design and Construction Value + Increase in Design and Other Service Value" amounts to 295,102,500,000 yen (2,951 billion 250 million yen).

Cost to realize opportunity

6,763,000,000

Strategy to realize opportunity and explanation of cost calculation

（Situation）The Obayashi Group is winning orders by ensuring clients understand the superiority of its ZEB and energy-saving technologies, which the Corporation owns, and by responding to the demand for ZEB, energy-saving buildings, and energy-saving renovations.

（Challenges） To this end, the Company must continue to develop technologies to meet the world's ZEB and energy conservation needs, discover demand, increase opportunities to win orders, and improve the certainty of winning orders. In addition, the Company must provide their customers with high-performance eco-friendly facilities to meet the demand for new ZEB and energy-efficient buildings, as well as that for energy-efficient retrofits such as improving equipment efficiency and enhancing building insulation performance.

(Actions) Therefore, it was decided to operate to realize the expansion of opportunities by promoting technological development and solution offerings from ① to ④ under this policy. This is considered an action to be taken by the 2026 fiscal year, based on the Medium-term Management Plan 2022.

① (Competitive Product Planning as a Comprehensive Construction Company)
At Techno Station, located in Kiyose City, Tokyo, the main building of the Obayashi Corporation Technical Research Institute, we developed a basic plan to complete a Zero Energy Building (ZEB) that achieves a net-zero energy balance within the facility using energy generated from renewable sources, which was completed in 2011. Furthermore, in the 2022 fiscal year, we completed the "Konan 2-chome Project" using the Obayashi Corporation design and construction capabilities. This project aimed to develop and put into practical use ZEB technologies, such as reducing external thermal loads and optimizing equipment by utilizing operational data from existing the Obayashi Group-owned properties. Additionally, as part of our next-generation training facilities, we completed "Port Plus," a pure wooden fire-resistant high-rise building (44 meters in height, 11 stories) in the same fiscal year. By using 1,990 cubic meters of wood, this building effectively reduces CO2 emissions by approximately 1,700 tons (approximately 40%) compared to steel-framed construction, stabilizing CO2 for an extended period throughout the lifecycle from material fabrication to construction, demolition, and disposal.

② (Strengthening Sales Promotion Structure to Expand Order Opportunities)
The Obayashi Group has traditionally managed customers' building history databases, maintenance, real estate asset management, and operational support based on past construction records, discovering energy-efficient new construction and renovation needs through communication with customers and securing orders. In April 2020, the Obayashi Corporation established the General Sales Headquarters at the Obayashi Construction Head Office, and in March 2022, it established the Carbon Neutral Solutions Department to respond quickly and effectively to diverse customer needs for carbon neutrality.

③ (Introduction of Energy Conservation Consulting Services for Customers and Collection of Achievements)
Since the 1990s, we have developed the "EcoNavi" software, which simulates effective energy-saving methods for buildings by utilizing performance and energy usage data of customers' existing facilities. We have continued to provide consulting on our customers' energy-saving needs and cost-effectiveness in the 2022 fiscal year.

④ (Strengthening Design Proposals and Technical Capabilities)
In addition to proposals based on the use of "EcoNavi," we have proposed the reduction of CO2 emissions through the use of the "CASBEE" environmental design method in our group's design projects.

（Results）
① The Obayashi Corporation Technical Research Institute, Techno Station, located in Kiyose City, Tokyo, achieved Zero Energy Building (ZEB) status, which balances all energy consumption with energy generated from renewable sources, based on operational records from the 2014 fiscal year. This accomplishment has been maintained for eight consecutive years, as of the 2022 fiscal year. The "Konan 2-chome Project" obtained ZEB Ready certification without the introduction of special energy-saving equipment. Japan's first high-rise pure wooden fire-resistant building, "Port Plus®," which was completed in March 2021 and serves as our next-generation training facility, also holds ZEB Ready certification.

② Since the establishment of the Carbon Neutral Solutions Department in March 2022, the number of inquiries received from both within and outside the company has exceeded 100 cases (at an approximate rate of one case per day) by the end of July. The Obayashi Corporation Construction's order intake for the 2022 fiscal year has increased by approximately 3% compared to the 2021 fiscal year.

③ Consulting projects related to "EcoNavi" in the 2022 fiscal year have increased, contributing to renovation work orders.

④ The operation-stage CO2 emissions reduction rate for our design projects in the 2022 fiscal year, as evaluated by CASBEE, achieved a 26% reduction compared to standard buildings. The realized cost is included in the 2022 environmental accounting and is as follows: "Research and development costs for design stage" (JPY 4,687 million) + "Environmental department costs" (JPY 354 million) + "Environmental design costs" (JPY 1,722 million) = JPY 6,763,000,000 (JPY 6,763 million).

Comment

ID

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity drive

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

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

If the construction business, which is the Obayashi Group's primary business, is affected by a considerable contraction of the construction market due to an economic downturn in Japan or overseas, it might impact the group's performance as it receives fewer orders. The Obayashi Group is proactively working to enhance its sales capabilities, procurement power, and productivity, while also diversifying its revenue sources by expanding its business scope. As part of this strategy, they have initiated the "Renewable Energy Business" as an action plan to realize a "carbon-neutral" society, aligning with their long-term vision, "Obayashi Sustainability Vision 2050." By accessing the emerging markets such as solar power generation and wind power generation, they anticipate an increase in revenue from selling electricity to long-term power companies based on renewable energy's feed-in-tariff system. This expansion is also expected to contribute to the growth of the earnings base of various the Obayashi Group companies. As of March 2023, the Obayashi Group has already deployed electricity generation projects using renewable energy, including 28 solar power plants, 2 onshore wind power plants, and 2 wood biomass power plants, achieving a total generation capacity (rated output) of approximately 225 MW. In recent years, they have focused on projects for the construction, maintenance, and operation of wind power generation, with the "Wind Lift Method" developed as a way to assemble wind turbines without the need for large cranes. This innovative approach has garnered recognition for their technical excellence, and the Mitanehamada Wind Power Station, which commenced operation in November 2017, received the 2020 Nikken Joint Venture Award "Civil Engineering Award." The newly started Rokkasho Village in Aomori " Kamikita Ogawara Onshore Wind Power Plant " in April 2022 also utilized the "Wind Lift Method" to efficiently assemble wind turbines within a minimal area. To meet the expanding domestic market for offshore wind power plants, the Self-Elevating Platform (SEP), which began construction in 2018, underwent design modifications, including enhanced crane lifting capabilities, and was completed in April 2023. By accessing the emerging markets of renewable energy such as solar power generation and wind power generation, the expansion of the earnings base of various the Obayashi Group companies from selling electricity to long-term power companies based on renewable energy's feed-in-tariff system, they anticipate a prospective profit of 1,069.5 million yen due to the rise in renewable energy prices. This is considered an "opportunity" based on the definition of significant financial impact and is identified as a strategically significant opportunity factor in the assessment.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,069,950,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact figure

Access to new and emerging markets in the "Renewable Energy Business," such as solar power generation and wind power generation, and the collective efforts of the entire the Obayashi Group in promoting these activities, create expectations of increased revenue through the feed-in-tariff system for long-term power companies based on renewable energy. The Obayashi Clean Energy, including subsidiary companies engaged in renewable energy businesses, achieved sales of 15,285,000,000 yen (152.85 billion yen) in the fiscal year 2022. The expected future increase in electricity prices is estimated to be 7%, based on the "Energy Supply and Demand Outlook for the Fiscal Year 2030" by the Agency for Natural Resources and Energy.

The profit due to fluctuations in renewable energy prices is calculated as follows: Profit from Renewable Energy Price Variations = Obayashi Clean Energy's Fiscal Year 2022 Sales × Expected Future Increase in Electricity Prices = 15,285,000,000 yen (152.85 billion yen) × Expected Future Increase in Electricity Prices 7% = 1,069,950,000 yen (10,699.5 million yen).

Cost to realize opportunity

106,000,000

Strategy to realize opportunity and explanation of cost calculation

(Situation) We have decided to implement a project for constructing, maintaining, and operating fixed-bottom type offshore wind power stations as Japan's first commercial large-scale offshore wind power generation business at Akita and Noshiro Ports in Akita Prefecture, working jointly with other companies through Akita Offshore Wind Corporation, a special purpose company that we invested in in July 2016. This project aims at constructing, maintaining, and operating offshore wind power stations with total capacity of about 140,000 kW and sell power to Tohoku Electric Power based on the feed-in tariff system for renewable energy over 20 years starting with the commencement of operations in 2022.

(Challenges) The total project cost is about 100 billion yen, so the risk of the Obayashi Corporation having to foot the whole investment was a challenge.

(Actions) As such, we hoped to procure low-cost development capital by issuing our own green bonds for our own "renewable energy businesses." The green bonds issued by the Obayashi Group in October 2018 were to be used to promote solar power generation, wind power generation (onshore, offshore), and other renewable energy

businesses. In June 2019, the company issued the Obayashi Corporation Sustainability Bond (the 24th unsecured bond). These ESG financings are managed to reduce financing risks and are viewed as actions to be taken until FY2026 based on the Medium-term Management Plan.

(Results) Some of the funds procured through the issuance of the Obayashi Corporation Sustainability Bonds in June 2019 were allocated to renewable energy projects, including a hydrogen production plant validation experiment, the Otsuki Biomass Power Plant, and the Kamikita Ogawara Onshore Wind Power Plant. The Otsuki Biomass Power Plant is already in operation, and the Kamikita Ogawara Onshore Wind Power Plant, the second onshore wind power project in the Obayashi Group, commenced construction in September 2020, with trial operations conducted in the fiscal year 2021 and power generation commencing in April 2022. The Noshiro Port Offshore Wind Power Project began commercial operation in December 2022, and the Akita Port Offshore Wind Power Plant started commercial operation in January 2023. These green power generation projects have diversified the energy sources in the Obayashi Group's renewable energy business and expanded its revenue base. Furthermore, to strongly commit to achieving "decarbonization," a key pillar of the Obayashi Group's sustainability efforts, the "Obayashi Corporation Sustainability Link Bond" was issued in April 2022, with the ongoing aim of promoting environmentally and socially sustainable economic activities and growth.

The issuance cost for the Green Bonds is 53 million yen, and the issuance cost for the Sustainability Bonds is 53 million yen, totaling 106 million yen in procurement costs.

Comment

ID

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of climate adaptation, resilience and insurance risk solutions

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

In the civil engineering business of the Obayashi Group, constructing civil structures for underground water storage in urban areas requiring advanced construction techniques and large-scale infrastructure regeneration, such as dam renovation, are recognized as competitive strengths.

According to the Japan Meteorological Agency's "Climate Change in Japan," in recent years, there has been an increasing trend in the number of days with daily

rainfall exceeding 100 millimeters and short-duration heavy rainfalls of over 50mm in an hour due to the impact of global warming. As a result, situations that exceed the conventional processing capacity of rivers and sewage systems have become more frequent. To prevent such flooding, the development of temporary underground water storage capacity in urban areas and the dredging and rejuvenation of rivers and dams are considered effective measures and opportunities. Especially in western Japan, where the Obayashi Group has a significant track record in domestic civil engineering, there has been an increase in opportunities for orders due to the recent nationwide expansion of typhoon damage. For example, at the Amagase Dam, which is the oldest multipurpose dam completed in 1964 in the Uji River system of Kyoto Prefecture, redevelopment was planned to enhance flood control capabilities to cope with recent frequent large-scale flood disasters, as well as to improve water utilization functions, such as converting to clean energy. Obayashi Corporation was awarded the 2022 Civil Engineering Society Prize for its construction work on the nation's first super-large cross-sectional tunnel-type flood-reduction facility, which achieved structural stability through advanced design and reliable construction and overcame delays in the construction process caused by soft geological conditions.

Access to this new market provides us with a competitive advantage in bid evaluations, and it is expected to lead to increased revenue, expanded order opportunities, and increased earnings. Civil engineering projects in urban areas, such as the construction of underground rivers and underground water storage tanks, river improvement projects, river dredging projects, seawall construction projects, and dam renovation projects, are categorized as climate adaptation-related civil engineering works. We will use the annual increase in order amounts or earnings if our new solutions for climate adaptation needs are adopted as financial impact metrics. The maximum annual increase in orders for climate adaptation-related civil engineering projects is 20,000,000,000 yen (approximately 200 billion yen), and this will be considered as a financial impact metric based on the definition of a significant financial impact.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-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)

3,000,000,000

Potential financial impact figure - maximum (currency)

20,000,000,000

Explanation of financial impact figure

Due to climate change, situations that exceed the traditional processing capacity of rivers and sewage systems are becoming increasingly frequent. The necessity of strengthening the national infrastructure to prevent these flood-related disasters has risen. Following the three-year emergency measures for national infrastructure strengthening until 2020, the government is implementing a concentrated strategy with a project scale of over 15 trillion yen until the fiscal year 2025, named 'Disaster Prevention and Reduction, Accelerated 5-Year Resilience Enhancement Measures.' This has led to the expansion of the disaster prevention civil engineering facilities construction market. Climate change adaptation technologies, such as the development of temporary underground water storage facilities in urban areas and the dredging of rivers and dams, have proven to be particularly effective. Even in local municipalities, new markets for public works projects, such as sewage and stormwater trunk lines using the medium-small cross-sectional shield method, have emerged. Access to these new markets provides our company group with a competitive advantage due to our advanced construction techniques, leading to anticipated increases in order volumes and revenue. To address the adaptation needs related to climate change, we propose new solutions through climate adaptation-related civil engineering projects and consider the increase in annual order volumes and revenue as financial impact metrics. For the purposes of this estimation, we assume that climate adaptation-related civil engineering projects in urban areas, such as the construction of underground rivers, underground water storage tanks, river improvement projects, river dredging projects, and seawall construction projects, with a scale of approximately 1 to 5 billion yen per project, will occur at a rate of 3 to 4 projects per year.

As a result of the development of climate change adaptation solutions, it is estimated that the annual order volume for climate adaptation-related civil engineering projects will increase from 3 billion yen (30 billion yen) to 20 billion yen (200 billion yen). The minimum value is calculated as 1 project at 10 billion yen × 3 projects + 50 billion yen × 0 projects = 3 billion yen (30 billion yen), and the maximum value is calculated as 1 project at 10 billion yen × 0 projects + 50 billion yen × 4 projects = 20 billion yen (200 billion yen).

Cost to realize opportunity

5,041,000,000

Strategy to realize opportunity and explanation of cost calculation

(Situation) The Obayashi Group has set the basic strategy of "Innovation in Technology and Business" as one of the pillars in its Mid-Term Business Plan for 2022. The company is focused on creating new customer value by aiming to provide business opportunities in carbon neutrality and well-being (safety, security, comfort, and health) through the development and improvement of technology. The Obayashi Group possesses a variety of related technologies in areas such as the construction of underground water storage facilities, river and dam dredging, excavation work, shield work, dam construction, among others, and considers these as its areas of expertise.
(Challenges) In the context of shield work, there has been a growing need for

environmental consideration in recent years, especially in locations where groundwater is used from the vicinity of shield tunnels. Concerns arise due to the risk of oil components from tail grease contaminating the groundwater. Additionally, when it comes to the construction of gravity-type concrete dams, accurately positioning the concrete formwork, which is necessary for pouring concrete, requires a significant amount of time and effort, even for skilled workers. Therefore, automating the movement and installation of concrete formwork to achieve labor-saving and automation has become one of the crucial challenges for improving future productivity.
(Actions) The Obayashi Group, in collaboration with ENEOS Corporation in September 2020, developed an environmentally friendly, high-performance tail sealant material for shield construction called "Sealnock BD." Furthermore, in November 2020, as part of the Kawakami Dam Main Construction Project (located in Iga City, Mie Prefecture, commissioned by the Independent Administrative Institution Water Resources Environment Center), they applied a technology known as the "Formwork Automatic Sliding System," which is consolidated within the Dam Information Construction Technology (ODICT™). They continued to refine and operate this technology in the 2022 fiscal year to reduce risks. This initiative is viewed as an action aligned with the Mid-Term Business Plan for 2022 and is expected to continue until the 2026 fiscal year.
(Results) "Sealnock BD" is an innovative sealant material used in shield construction that improves upon traditional tail sealants to prevent the inflow of groundwater into tunnels. It is the first in Japan to obtain the Eco Mark due to its use of biodegradable materials, which reduces its environmental impact. Additionally, in the development of the "Formwork Automatic Sliding System," various technologies were combined, including an automatic climbing scaffold with lifting capabilities and a survey system for confirming the position of the formwork. This combination enables a series of tasks, from removing the formwork from the cast layer to sliding (vertical movement), positioning, and installation, to be performed entirely automatically using a tablet.

The realized cost for this initiative is included in the 2022 fiscal year's environmental accounting, consisting of "Research and Development Costs" (4,687 million yen) and "Environmental Department Costs" (354 million yen), totaling 5,041 million yen.

Comment

C3. Business Strategy

C3.1

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

Row1

Transition plan

Yes, we have a transition plan which aligns with a 1.5° C world

Publicly available transition plan

Yes

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

We do not have a feedback mechanism in place, but we plan to introduce one within the next two years

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

【Obayashi】Initiatives for a low-carbon, recycling-oriented, nature-symbiotic society _ Sustainability.pdf

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
Row1	Yes, qualitative and quantitative

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 scenarios RCP 1.9	Company-wide		[Scenario Identification] The Obayashi Corporation has formulated a long-term vision titled "Obayashi Sustainability Vision 2050" to outline the company's overall and long-term direction for its business activities from an environmental perspective. As one of the goals for the period from 2040 to 2050, the company has set the target of "decarbonization" and is actively working towards achieving a sustainable society. To realize this vision, they have identified the formation of an environmentally conscious society, including the reduction of CO2 emissions, as an essential ESG priority. In 2020, due to the need to analyze the impact of business activities in relation to the year 2030, they expressed their support for the "Task Force on Climate-related Financial Disclosures (TCFD)" recommendations, recognizing the importance of addressing climate-related risks and opportunities. In order to understand the medium to long-term impact of climate-related issues on their business, they conducted research on available scenario literature to identify and assess physical risks and opportunities. In

			their analysis, they used the RCP2.6 scenario as a 2°C scenario, but starting from the 2022 fiscal year, they are reevaluating their approach by using the RCP1.9 scenario as a 1.5°C scenario. [Parameter] The social quantitative parameter is based on the forecast of economic development, and the impact on business is based on the sales ratio and growth rate. Climate-related quantitative parameters such as the increase in midsummer days due to rising temperatures, the increase in natural disasters, and changes in investments in infrastructure are taken into account. [Assumption] Scenario analysis for the year 2030 was based on available public data. It is assumed that a linear change occurs in the data for the periods for which no data are available. It is also assumed that there will be changes in working hours due to rising temperatures in 2030 as well as in the impact of natural disasters. Regarding market and customer trends, we assume that, due to changes in construction demand and other factors, there will be a need to develop infrastructure that can cope with the growing impact of natural disasters. [Analytic Choice] The scenario analysis set the year 2030 as an intermediate year to 2050, the target year of the long-term vision. The JMA report on temperature increase is referenced.
Physical climate scenarios RCP 8.5	Company-wide		[Scenario Identification] Having established the long-term vision "Obayashi Sustainability Vision 2050" that sets the company-wide, long-term direction of its business activities from an environmental perspective and having set decarbonization as one of our targets for the years 2040 to 2050, the Obayashi Corporation is working to realize a sustainable society. We aim to realize this vision by conducting business activities designed to prevent global warming. These include setting "Establish an Environmentally Responsible Society," which includes reducing CO2 emissions, as one of our ESG Materialities. The company has declared our support for the TCFD. We have conducted scenario analyses on our businesses in order to identify and

			assess climate-related risks and opportunities and understand the medium- to long-term impacts climate problems may have on our business by the year 2030. The RCP8.5 was used as the 4°C scenario in the physical risk/opportunity analysis.. [Parameter] The forecast of economic development serves as a social quantitative parameter, and the impact on business is considered based on factors such as sales ratios and growth rates. Climate-related quantitative parameters include changes such as an increase in the number of extremely hot days due to rising temperatures, the expansion of natural disasters, and investments in infrastructure. [Assumption] We are conducting scenario analysis based on available publicly accessible data for the year 2030. For periods with no available data, we assume a linear change. In our assumptions for 2030, we consider changes in working hours due to temperature rise and variations in damages caused by the impact of natural disasters. Additionally, regarding market and customer trends, we assume that adjustments to processes will be necessary due to changes in working hours during the summer, leading to alterations in these trends. [Analytic Choice] The scenario analysis set the year 2030 as an intermediate year to 2050, the target year of the long-term vision. The Japan Meteorological Agency's report on temperature increase is referenced.
Transition scenarios IEA NZE 2050	Company-wide		[Scenario Identification] The Obayashi Corporation has formulated a long-term vision, "Obayashi Sustainability Vision 2050," to demonstrate the company's comprehensive and long-term direction for its business activities from an environmental perspective. As one of the goals for the period from 2040 to 2050, the company advocates "carbon neutrality" and is progressing initiatives towards achieving a sustainable society. In pursuit of realizing this vision, they have expanded business activities aimed at preventing global warming, setting "Formation of an environmentally conscious society" as a critical ESG priority, including reducing CO2 emissions. Acknowledging the need to analyze the impact on business operations assumed for the year

			2030, in 2020, the company expressed its support for the "Task Force on Climate-related Financial Disclosures (TCFD)" recommendations. To understand the medium to long-term impact of climate-related issues on their business, they identified and evaluated climate-related risks and opportunities. In the analysis of transition risks and opportunities, they have been using the IEA_SDS scenario as a 2°C scenario. However, starting from the 2022 fiscal year, they are reevaluating their approach and using the IEA_NZE2050 scenario as a 1.5°C scenario. [Parameter] The forecast of economic development serves as a social quantitative parameter, and the impact on business is considered based on factors such as sales ratios and growth rates. Climate-related quantitative parameters include changes such as an increase in the number of extremely hot days due to rising temperatures, the expansion of natural disasters, and investments in infrastructure. [Assumption] We are conducting scenario analysis for the year 2030 based on available publicly accessible data. For periods with no available data, we assume a linear change. Assumptions for 2030 include changes such as taxation on CO2 emissions to curb temperature rise, increased demand for renewable energy, and promotion of the adoption of energy-efficient and renewable technologies. Additionally, regarding market and customer trends, we assume changes such as taxation, expansion of renewable energy demand, and cost fluctuations due to technological applications. [Analytic Choice] The scenario analysis assumed the year 2030 as an intermediate year to 2050, the target year of the long-term vision. The IEA's WEO2019 is referenced for tax prices and renewable energy prices.
Transition scenarios IEA STEPS (previously IEA NPS)	Company-wide		[Scenario Identification] The Obayashi Corporation has formulated a long-term vision, "Obayashi Sustainability Vision 2050," to delineate the company's comprehensive and long-term direction for its business activities from an environmental perspective. As one of the goals for the period from 2040 to 2050, the company advocates "carbon neutrality" and is actively pursuing initiatives

			towards achieving a sustainable society. In an effort to realize this vision, they are expanding business activities focused on preventing global warming, setting "Formation of an environmentally conscious society" as a critical ESG priority, including the reduction of CO2 emissions. Acknowledging the need to analyze the impact on business operations assumed for the year 2030, in support of the "Task Force on Climate-related Financial Disclosures (TCFD)," the company expressed its commitment. They are identifying and evaluating climate-related risks and opportunities to comprehend the medium to long-term impact of climate-related issues on their business. For the analysis of transition risks and opportunities, they have utilized the IEA_STEPS scenario as a 4°C scenario when investigating available scenario literature. [Parameter] The forecast of economic development serves as a social quantitative parameter, and the impact on business is considered based on factors such as sales ratios and growth rates. Climate-related quantitative parameters include changes such as an increase in the number of extremely hot days due to rising temperatures, the expansion of natural disasters, and investments in infrastructure. [Assumption] We are conducting scenario analysis for the year 2030 based on available publicly accessible data. For periods with no available data, we assume a linear change. Assumptions for 2030 include changes related to energy demand and prices to adapt to temperature increases. Additionally, regarding market and customer trends, we assume changes such as fluctuations in material costs due to variations in energy prices.

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.

Row1

Focal questions

The transition scenario focuses on the impact of the carbon tax on the company's own costs associated with the shift to a decarbonized society toward a 1.5°C world, the impact on the customer side of the shift to decarbonization as a result of stricter environmental regulations, and what opportunities are likely to be gained in the Obayashi's Corporation service areas.

In the physical scenario, the focus was on the impact of a long-term temperature increase of about 4°C on the client side of the Company due to more severe natural disasters and worsening labour conditions due to higher temperatures and changes in demand for the Obayashi's Corporation existing service offerings to help solve these issues.

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

In the transition scenario, the following risks ① and opportunities ② are assumed.

①Introduction of a carbon tax:

Overview） ・Cost increase when levied on CO2 from business activities

・Procurement cost increase from higher prices on construction materials with high energy consumption

2030 impact) 4℃ scenario = minor, 2℃ scenario = major

②Expanding needs for energy conservation and renewable energy technologies

Overview)・Increasing superiority in ZEB (net zero energy buildings) and energy-saving technologies that meet society's needs

・Switching from existing energy to renewable energy

・Expanding office demand for green building certification

2030 impact） 4℃ scenario = medium, 2℃ scenario = major

Of the above, ① will be to curb costs by reducing energy consumption at each stage through promotion of energy conservation at the construction stage and application of low-carbon materials; and ② will be to promote the development of ZEB and other technologies and apply them to buildings to reduce energy consumption during operation, thereby differentiating buildings and expanding opportunities to win orders.

In the physical scenario, the following risks ① and ② and opportunities ③ are assumed.

① Rise in summer temperatures

Overview） ・Increasing health risks for workers at construction sites, including heatstroke

・Deepening worker shortages due to worsening working environments at construction sites

2030 impact） 4℃ scenario = major, 2℃ scenario = majo

② Intensification of natural disasters (typhoons, torrential rains, floods, etc.)

Overview） ・Increasing risks such as damages to buildings under construction, suspended work, and damages to construction material suppliers due to storms and floods

・Decreasing value of real estate in areas with high flood risk

2030 impact） 4℃ scenario = medium, 2℃ scenario = medium

③Measures for National Resilience Enhancement

Overview） ・Expanding demand for construction, maintenance, and repairs of infrastructure to prevent and decrease disaster risk and increase national land resilience

2030 impact） 4℃ scenario = major, 2℃ scenario = major

As regards the above, ① the introduction of mechanized construction will reduce construction schedule delays due to deterioration in the labour environment; ② strengthening the BCP, including the supply chain, will reduce construction schedule delays due to wind and flood damage; and ③ the development of disaster prevention/mitigation/toughness technologies will be promoted and applied to buildings and infrastructure to differentiate them and expand opportunities to win orders.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

Business area	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	The main products and services provided by the Obayashi Corporation are the design and construction of buildings. In the construction industry, design and construction are the main focus of business activities. However, the greenhouse gas (GHG) emissions during the operational stage of buildings (after handover) are significant. Activities aimed at emission reduction during the construction stage are crucial, similar to the construction phase. The future situation is expected to involve substantial reductions in GHG emissions due to strengthened regulations, taking into account national policies, such as the "Japan's Pledge Draft" under the 2015 Paris Agreement, and the government's "Carbon Neutral Declaration" for 2050 in September 2020. Similar measures are likely to be necessary in the construction market. In the national "Basic Energy Plan," there is an aim to achieve ZEB for new public buildings by 2020 and, for new buildings on average, by 2030. Specific measures for reducing GHG emissions during the operational phase of buildings for climate change mitigation are anticipated,

		leading to an increase in construction orders for ZEBs aiming for zero GHG emissions. During such developments, there is a risk of losing construction contracts if a company does not possess the technology and know-how to design and construct buildings that meet the needs of the clients. Conversely, having a competitive edge through technology and know-how can lead to an increase in contract opportunities and, consequently, an increase in revenue, influencing construction and development projects. The Obayashi Corporation, in its TCFD scenario analysis, anticipates that the expansion of the demand for energy-saving and renewable energy technologies will increase the significance of ZEB and energy-saving technologies that align with societal needs. As part of its response, the company has set the goal of "Developing and Promoting ZEB Technologies to Achieve Business Viability and Comfort." In light of the above, it becomes imperative to supply buildings to the market with lower GHG emissions. Two key challenges for addressing this are: 1) the development and possession of technology related to buildings to meet regulations and needs, and 2) the enhancement of technological proposal capabilities and competitiveness. Regarding the first challenge 1), regulations and needs are expected to be shaped based on Japan's Pledge Draft. The company matches this draft with its business scale and content, calculating the upper limit of operational phase emissions for buildings in 2030. The total emission reduction rate is calculated within this upper limit, reflecting the emission reduction target set in line with national regulations, which is shared with the technology development department. For the second challenge 2), as part of efforts to enhance technological proposal capabilities and competitiveness, the company sets a numerical target for the reduction rate of CO2 emissions per floor area during the operational phase concerning the "Reference Building" (a building with average performance set by CASBEE) compared to the "Subject Building" (a building with designed performance) evaluated through CASBEE in design and construction

		projects. This encourages the adoption of energy-saving technologies, contributing to enhanced competitiveness through technological proposals. For the first challenge 1), the company has set a medium- to long-term target for Scope 3 emission reduction rate, with a target of -27.5% by fiscal year 2030 compared to fiscal year 2019, and has been working towards this goal. The achieved result for fiscal year 2022 is -38.9% compared to fiscal year 2019. For the second challenge 2), the achieved reduction rate for operational phase emissions per floor area in fiscal year 2022 is -26%. Since CASBEE is periodically revised, the achievement against the reference building ratio for the relevant fiscal year is used as an indicator, aiming to continuously maintain environmental performance more advanced than that of standard buildings concerning comprehensive environmental performance. This is done by setting a reduction rate in operational phase emissions per unit area as mentioned earlier. The basis for calculating the first challenge 1) is the operational phase emissions of buildings supplied to the market that fall under Scope 3 Category 11. This is the cumulative total of the operational phase annual emissions for design and construction projects calculated from the results of the second challenge 2), contributing to the reduction of GHG emissions in products and services. The company has positioned "Formation of an environmentally conscious society" as an ESG materiality, and its action plan includes the promotion of environmentally conscious businesses and the promotion of decarbonization, setting KPIs and actively engaging in activities. While KPIs related to ESG activities are set as non-financial quantitative indicators in the medium-term management plan for 2022, this plan is based on the long-term vision "Obayashi Sustainability Vision 2050" and is a decision-making document of strategic importance. These activities have an impact on the business strategies of construction and development projects. The medium-term management plan for 2022 covers a five-year period from 2022 to 2026, and the long-term vision "Obayashi Sustainability Vision 2050" plans until the year 2050.

Supply chain and/or value chain	Yes	The supply chain and value chain of the Obayashi Corporation are broadly categorized into material production and procurement (raw materials, secondary products, equipment, etc.) that constitute construction, and labor (workers) involved in construction activities on-site. The impact of changes in greenhouse gas (GHG) emissions during material production and construction on products and services should be considered due to potential market effects arising from regulations associated with the Paris Agreement. The national policies outlined in the "Japan's Pledge Draft" under the 2015 Paris Agreement provide emission targets for each sector for the fiscal year 2030. Material production and on-site construction fall under industrial sectors, and it is anticipated that substantial reductions will be required. Specifically, regulatory enhancements for GHG emission reduction during material production and on-site construction, as part of measures for climate change mitigation, are expected to lead to increased construction costs due to the imposition of carbon taxes and additional facility investments. The risk of decreased competitiveness due to differences in the ability to respond to cost increases may result in the loss of construction contracts, leading to decreased revenue and profit. On the contrary, developing materials that suppress GHG emissions during production can enhance competitiveness, expanding opportunities for contracts and influencing an increase in revenue. In the TCFD scenario analysis, the Obayashi Corporation identifies transition risks, expecting an increase in energy consumption of construction materials due to the introduction of carbon taxes, resulting in higher procurement costs. As a response, the company advocates the "Establishment of Design and Construction Technology for Wooden Medium- to High-Rise Buildings and Building Supply Chain Construction." Moreover, in on-site construction, even with a transition to climate change mitigation, a slight temperature rise is unavoidable. This could lead to a decrease in work efficiency due to restrictions on outdoor work during high temperatures (increased break times), resulting in increased construction costs due to project delays and work during periods of lower temperatures outside regular

		working hours. In the TCFD scenario analysis, the Obayashi Corporation also identifies physical risks. With the rise in summer temperatures, it expects an increase in health risks, such as heatstroke among workers, and worsened working conditions on construction sites, potentially leading to a shortage of workers. The company proposes measures such as "Further Improvement of Productivity and Construction Safety through the Utilization of Labor-Saving Technology and ICT" and "Innovative Technological Development for Improving Working Conditions on Construction Sites." Both of these impacts are considered for construction and development projects. In material production, selecting low-carbon materials and collaborating with cooperative companies for the development of low-carbon materials are necessary. For material transport, measures such as improving the fuel efficiency of vehicles are required. In on-site labor, mechanization, equipment improvement, and further technological development are needed to enhance work efficiency, requiring collaboration with cooperative companies similar to material production. Implementing these measures will address the identified challenges. The company has established the "Obayashi Group CSR Procurement Policy" and "Obayashi Group CSR Procurement Guidelines," requiring suppliers to comply with the guidelines. The guidelines promote business activities that consider environmental conservation and reduce environmental impact, including measures against climate change. They also specify the need to comply with all relevant laws, international treaties, and social norms applicable to countries and regions where business activities are conducted. All items in these guidelines, including those related to climate change, are stipulated in contract clauses with suppliers, and confirmation is made at the time of contracting. Additionally, the company conducts an annual survey to assess suppliers' compliance with the guidelines. The company plans to continue the survey while enhancing its content and expanding the scope of target companies, strengthening supply chain management. The company calculates CO2 emissions for Scope 3

		Category 1 "Purchased Goods and Services" as part of material production and CO2 emissions for Scope 3 Category 4 "Upstream Transportation and Distribution" for material transport, evaluating the reduction rate. For labor, as it involves on-site activities, energy-saving activities in Scopes 1 and 2 are evaluated in terms of the reduction rate of CO2 emissions. Furthermore, the company uses the green procurement rate of construction equipment as a key performance indicator (KPI), encouraging the selection of environmentally friendly materials and contributing to emission reduction. As part of its commitment to ESG, the company has set a medium-term target for a reduction rate of 27.5% by fiscal year 2030 compared to fiscal year 2019 for Scope 3 emissions, and the achieved result for fiscal year 2022 is a reduction of 38.9% compared to fiscal year 2019. For Scope 1 and 2 emissions, the company has set a medium-term target for a reduction rate of 46.2% by fiscal year 2030 compared to fiscal year 2019 and has been working towards this goal. The achieved result for fiscal year 2022 is a reduction of 12.6% compared to fiscal year 2019. Regarding the confirmation of suppliers' compliance with guidelines through surveys, the company conducted surveys for approximately 1,500 suppliers in fiscal year 2022, achieving a response rate of 89.1% (1,299 companies, accounting for 79% of procurement amounts). These activities are all interconnected with ESG materiality, its action plans, and KPIs. While KPIs related to ESG activities are set as non-financial quantitative indicators in the medium-term management plan for 2022, this plan is based on the long-term vision "Obayashi Sustainability Vision 2050" and is a decision-making document of strategic importance. The activities related to the ESG materiality "Promotion of Responsible Supply Chain Management" and the action plan "Promotion of CSR Procurement" are influencing the business strategies of construction and development projects. The medium-term management plan for 2022 covers a five-year period from 2022 to 2026, and the long-term vision "Obayashi Sustainability Vision 2050" aims to achieve the vision by the year 2050.

Investment in R&D	Yes	The primary business of the Obayashi Corporation is the construction business, so technologies relevant to construction and buildings and infrastructure have a major impact. The current Medium-Term Business Plan 2022 has as one of its technology strategies "Building a Technology Portfolio and Ecosystem for Competitive Advantage". The success or failure of technological development, addressing societal challenges including climate change mitigation, has a significant impact on our business. We have to reduce greenhouse gas emissions in accordance with the national policy in the 2015 Paris Agreement as well as other laws and regulations, which also means that we need to develop and possess technologies that match corresponding social needs. Concrete challenges include developing technologies for supplying energy-saving construction and energy-saving buildings. The national policy for the 2015 Paris Agreement ("Japan's draft agreement") also defines emission goals for FY2030 by sector, with the management of buildings and infrastructure falling under administration departments, materials production and on-site construction under production departments, and materials transportation under transportation departments, so as to anticipate reductions that suit the targets set for each sector. Moreover, the national Energy Basic Plan states that it aims to realize ZEB on average for new public structures by 2020 and for other new structures by 2030, so we anticipate that we need to reduce greenhouse gas emissions accordingly. In the Obayashi Corporation's TCFD scenario analysis, the growing importance of ZEB and energy-saving technologies in response to social needs from expanded demand for energy-saving and renewable energy technologies was identified as a transition opportunity, to which we aim to respond by "promoting the development and practical application of ZEB technology that provides comfort and is business-feasible." More concretely, as keeping down greenhouse gas emissions to fight climate change becomes a social need, we expect to see more orders for ZEB (zero energy buildings) that strive to eliminate greenhouse gas emissions during the management stage of buildings and infrastructure. As part of this, we need to possess technologies and know-how that can meet client needs or we will risk missing more orders and see a drop in sales. On the other hand, if we secure advantages in technologies and know-how, this may increase sales by providing more orders. As regards materials production, the costs of materials when keeping down greenhouse gas emissions during manufacturing affect competitiveness, while the costs of additional equipment to counter rising temperatures during on-site construction can also

		affect competitiveness. If the added value for cost increases is not accepted by the client or if the company is outperformed in price competitiveness by competitors in the same industry, there is a risk of losing construction contracts. On the other hand, if cost containment equivalent to the added value is achieved, it is assumed that this could lead to an expansion of opportunities for securing contracts. All of these factors are influenced by the presence or absence of technical expertise and the development and possession of technology and know-how in construction and development projects. Research themes are selected annually, and we continuously make technological development investments as appropriate by carefully investigating and reflecting national policy, laws and regulations, and social needs. Environment-related R&D expenses are calculated according to the environmental accounting every year and disclosed. R&D is many times carried out over several years, so it can be difficult to evaluate results on a one-year basis, which is why we are looking into techniques for analyzing the effects of adopting our new development technologies in construction and implementing them in buildings and infrastructure by measuring them as indicators of emissions from our direct and indirect contributions. Our environment-related R&D expenses were 4,987 million yen in FY2020. The mid- to long-term target for Scope 3 emission reduction rate is set at 27.5% below the FY2019 level for FY2030, and the actual result for FY2022 was 38.9% below the FY2019 level. The company has set a mid- to long-term goal of reducing Scope 1 and 2 emissions by 46.2% in FY2030 compared to FY2019 and is continuing these activities. The actual result in FY2022 was 12.6% below the FY2019 level. The emission reduction target is based on the Science Based Targets (SBT) certified in 2022 and is aligned with the Obayashi Sustainability Vision 2050, the long-term vision of our company group. It is grounded in strategically significant decision-making. Moreover, the Medium-Term Business Plan 2022, which is a business strategy, is also based on the long-term Obayashi Sustainability Vision 2050, and it is thought to impact our construction and development businesses since it includes R&D investments. The Medium-Term Business Plan 2022 covers the five-year period from 2022 to 2026, while we aim to realize the long-term Obayashi Sustainability Vision 2050 by 2050.
Operations	Yes	The main business of the Obayashi Corporation is construction, and the effective management of climate change-related measures in construction activities

		significantly impacts the company's performance. To examine the impact of climate-related risks and opportunities in its business activities and incorporate measures, the challenge is to establish an organizational and standardized framework for management. The company prioritizes safety, quality, and environmental considerations in its business operations. Insufficient clarity in the operational procedures and goal-setting for management activities can lead to a decrease in the effectiveness of activities aimed at reducing GHG emissions on construction sites. This may result in an inability to achieve sufficient reduction outcomes, posing risks mentioned earlier in "Products and Services," "Supply Chain and Value Chain," and "Research and Development." On the other hand, effective management operations can lead to the achievement of reduction effects in various areas, as mentioned earlier. These initiatives primarily impact the construction business, but considering them as fundamental to all business sectors and departments is crucial. In the TCFD disclosure framework under "Governance," the Obayashi Corporation states, "Based on the basic principles of the Obayashi Corporation, we have established the 'Sustainability Committee' under the Board of Directors, with the President and Representative Director as the chairman and external directors as members. The Sustainability Committee, with the Global Management Strategy Department as the secretariat, meets at least twice a year to identify sustainability issues, discuss and propose response policies, and review the implementation status. Based on the discussions in the Sustainability Committee, the management policies for promoting ESG management and achieving SDGs are determined by the Board of Directors. In the executive division, each specialized committee in the field of sustainability, established by the Management Planning Committee commissioned by the President, formulates, promotes, and monitors measures in line with the management policies determined by the Board of Directors. Moreover, they are responsible for disseminating information internally and promoting initiatives across the entire group. " The governance structure diagram for climate change and the organizational

		overview and activity summary of each department are disclosed. Likewise, in the TCFD disclosure framework under "Risk and Opportunity Identification," the company outlines, "In the process of judging the impact of short-term, medium-term, and long-term climate-related risks and opportunities when examining business, strategy, and financial plans, the Obayashi Corporation also considers the impact of climate change. For short-term risks and opportunities, we review and revise key measures for environmental conservation semi-annually at the Environmental Management Special Committee. For medium-term risks and opportunities, we conduct detailed analyses in the medium-term management plan and rolling plan. For long-term risks and opportunities, we review the long-term vision 'Obayashi Sustainability Vision 2050' as needed. We also identify risks and opportunities for 2030 during scenario analysis." The company has established the "Environmental Management Special Committee" chaired by the environmental officer under the Executive Committee commissioned by the president. This committee formulates and reviews plans and objectives based on the medium-term management plan and considers and reviews activities based on the results of evaluations of the environmental management system (EMS). Based on the plans and goals set by the Environmental Management Specialized Committee, the environmental departments at the head office, each branch, and affiliated group companies take the lead in promoting and implementing specific activities. The content of the Environmental Management Specialized Committee is reported to the Management Planning Committee, Management Meetings, and the Board of Directors. The Board of Directors oversees climate-related risks and opportunities. The effectiveness of operations is evaluated through the achievement of goals set in the EMS, analysis of factors, and feedback to activities for the next fiscal year. EMS goals are set based on the ESG Materiality Action Plan and KPI linked to the mid-term management plan. For instance, under the action plan "Promotion of Decarbonization," the KPI is "CO2 emission reduction rate," with targets set at ▲46.2% for Scopes 1 and 2 and ▲27.5%

		for Scope 3 by 2030 compared to 2019. The company is actively promoting initiatives to achieve these targets. The company has also certified these reduction targets in 2022 based on the Science-Based Targets (SBT) framework. EMS reflects these reduction targets, ensuring the effectiveness of GHG emission reduction across business units. KPIs in the ESG initiatives are considered non-financial quantitative indicators in the mid-term management plan for 2022, which is based on the long-term vision "Obayashi Sustainability Vision 2050" and is strategically important decision-making. Considering the relationship with ESG initiatives mentioned earlier, EMS is based on the business strategy of the mid-term management plan, and its management achievements impact various business sectors.The mid-term management plan for 2022 spans from 2022 to 2026, and the long-term vision "Obayashi Sustainability Vision 2050" aims for the realization of the vision by 2050.

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
Row1	Revenues Direct costs	【Direct costs】 The direct costs in construction include material costs, labor costs (personnel expenses), and direct expenses (utilities such as water and electricity). The procurement costs for construction equipment that constitutes the construction and affects environmental performance correspond to material costs. The procurement of construction equipment, which emits CO2 during production at the factory and transportation to the construction site, has an impact on climate change. The national policy based on the Paris Agreement of 2015 ("Japan's Intended Nationally Determined Contributions") sets emission targets for each sector for the fiscal year 2030. Production and on-site construction of materials fall under the industrial sector, and material transportation falls under the transportation sector, thus requiring appropriate reductions. For the client, emissions from construction activities are considered

		emissions through the supply chain, and emission reduction is expected due to similar reasons. By planning the application of construction equipment with low environmental impact, there is a risk of losing bids if it results in cost increases and falls behind competitors. Conversely, if it can be kept within the assumed cost for the client, opportunities to secure contracts with a competitive advantage in construction costs increase. The Obayashi Corporation has been promoting its business with a focus on ESG and key performance indicators (KPIs) in its medium-term management plan 2022 for the fiscal years 2022 to 2026. Specifically, under the ESG materiality "Promotion of Responsible Supply Chain Management," they are advancing the action plan "Promotion of CSR Procurement," emphasizing the application of construction equipment with low environmental impact. As part of these measures, they have established the "Obayashi Group CSR Procurement Policy" and the "Obayashi Group CSR Procurement Guidelines," requiring suppliers to adhere to the guidelines. The guidelines stipulate the promotion of business activities that consider environmental conservation and reduction of environmental impact, including measures against climate change. Compliance with all these guidelines is included in the contractual terms with suppliers, which is confirmed at the time of contract execution. Expanding compliance with guidelines promoting environmentally conscious business activities, including environmental conservation and reduction of environmental impact, is expected to contribute to reducing environmental impact. By implementing the aforementioned action plan, the company aims to increase the proportion of construction projects that address the needs for reducing environmental impact in awarded contracts, working towards achieving the sales and profit targets outlined in the medium-term management plan for 2022. Additionally, the Obayashi Corporation has established the "Green Procurement Guidelines for Office Supplies and Construction Equipment," encouraging the procurement of environmentally friendly materials in all business activities. During procurement, they consider the following environmental conservation measures: 1) promotion of energy and resource conservation, 2) reduction of carbon dioxide emissions, 3) suppression of waste generation, 4) promotion of recycling, 5) suppression of the use of hazardous chemicals, and 6) conservation of the surrounding environment and ecosystems. In selecting items, consideration is given to those that contribute to reducing environmental impact based on the "Law concerning the Promotion of Procurement of Eco-friendly Goods and Services by the State and Other Entities" (Green Purchasing Law). Criteria include items specified by the law, those with a large procurement quantity, those with significant environmental impact reduction effects regardless of the quantity, and those resulting from the company's technological development.

		The main "specified items" for the company's construction materials include construction-generated soil, asphalt concrete, cement, concrete, and steel materials. 【Revenue】 The Obayashi Corporation's major businesses include construction, development, and green energy. In response to the national policies outlined in the Paris Agreement of 2015 ("Japan's Intended Nationally Determined Contributions") and the Japanese government's "Carbon Neutral Declaration" in September 2020, there is a significant demand for substantial greenhouse gas (GHG) emission reductions, leading to the need for similar measures in the construction market. Specifically, there is a requirement for reducing CO2 emissions during the operational phase of buildings and construction activities, adapting designs to meet environmental performance standards, and implementing construction techniques and expertise that achieve CO2 emission reductions below the specified levels. The Green Energy business, primarily focused on renewable energy, is positioned as a crucial growth strategy to secure diverse revenue sources and aims to provide a stable supply of CO2-free electricity. With a focus on solar power generation and biomass power generation, the Obayashi Corporation has already operationalized 32 power plants with a combined capacity of approximately 225MW. Efforts are underway to explore the challenging large-scale offshore wind power generation projects. In construction and development businesses, the risk lies in the potential loss of bid opportunities if the company lacks the technical expertise to design and construct buildings that meet the needs of the client. This risk could lead to a decrease in revenue and profit. Conversely, possessing competitive advantages through the mentioned technical expertise can lead to an expansion of construction project awards, resulting in increased revenue and profit. Climate change mitigation efforts and the timely execution of research, technological development, and knowledge acquisition related to societal and market needs have a significant impact on the success of the business. The mid-term management plan for 2022 sets revenue and operating profit targets as key performance indicators (KPIs) over the period from the fiscal year 2022 to 2026. The strategic foundation for achieving these goals is the commitment to ESG initiatives. The plan includes addressing environmental challenges and promoting the formation of a socially responsible society through the ESG materiality of "Creating an Environmentally Considerate Society." The action plan involves promoting decarbonization, and the KPI of "CO2 Emission Reduction Rate" is set for Scopes 1, 2, and 3, aiming to resolve societal challenges and expand business domains through technology acquisition.

		The acquisition of new technologies, as mentioned earlier, has a direct impact on revenue and profit. Improving in this area contributes to achieving the management's goal. Additionally, by continuing investments in renewable energy projects, the company is steadily increasing its power generation capacity, aligning with the goal of achieving targets. Indicators, Targets, and Fiscal Year 2022 Performance for CO2 Emission Reduction and Financial Plan are as follows: Indicators: Scope 1 & 2 Targets: 46.2% reduction by the fiscal year 2030 (compared to the fiscal year 2019) FY 2022 Performance:12.6% reduction Indicators: Scope 3 Targets: 27.5% reduction by the fiscal year 2030 (compared to the fiscal year 2019) FY 2022 Performance: 38.9% reduction Indicators: Annual Power Generation Capacity through Renewable Energy Business Targets: Over 683,700 MWh in FY 2022 → Converted CO2 Emissions: 310,000 t-CO2 FY 2022 Performance: 540,279 MWh → Converted CO2 Emissions: 240,000 t-CO2 Revenue Indicators: FY 2022 target of approximately 2 trillion yen according to the mid-term management plan for 2022 FY 2022 Performance: 1,983.8 billion yen Operating Profit Indicators: FY 2022 target of approximately 1000 billion yen according to the mid-term management plan for 2022 FY 2022 Performance: 938 billion yen Moreover, the investment and initiatives for the Construction and Development businesses are as follows:

		Construction Business Investment: Research and development of construction technology (2022-2026 Plan Total: 800 billion yen FY 2022 Performance: 161 billion yen) Initiatives: - Providing environmentally efficient buildings (e.g., ZEB) - Promoting energy-efficient construction - Introducing low-carbon materials (e.g., application of clean concrete, green procurement) - Introducing energy-efficient construction machinery - Achieving automation and autonomous construction, etc. Development Business Investment: Sustainable investment (Target Share in Real Estate Rental Business Investment: Over 90% Achieved approximately 94% in FY 2020) Initiatives: - Providing green buildings - Investing in energy-efficient projects, etc. Green Energy Business Investment: Investment in renewable energy generation projects, etc. (2022-2026 Plan Total: 500 billion yen FY 2022 Performance:** 31 billion yen) Initiatives: - Solar power generation projects - Biomass power generation projects - Onshore wind power generation projects - Geothermal and small hydropower generation projects, etc. Note that the impact of the COVID-19 pandemic persisted in some areas of the Construction and Development businesses in FY 2022. However, overall, the targets based on the mid-term management plan for 2022 were generally achieved, indicating steady progress in both climate change mitigation efforts and

		securing revenue and profit.

C3.5

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

Identification of spending/revenue that is aligned with your organization's climate transition
No, but we plan to in the next two years

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 based on scientific evidence?

Yes, this target has received approval from the Science-Based Targets initiative (SBTi), which is based on scientific evidence.

Ambition level of the goal

Aligned with the 1.5°C target

Year of Target Implementation

2022

Target coverage

Company-wide

Scope(s)

Scope1

Scope2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Base year

2020

Base year Scope 1 emissions targeted by the goals (metric tons CO2e)

258,800

Base year Scope 2 emissions targeted by the goals (metric tons CO2e)

118,700

Scope 3 Category 1 Base Year: Emissions (CO2-equivalent tons) from purchased goods and services targeted by the goal.

Scope 3 Category 2 Base Year: Emissions (CO2-equivalent tons) from capital goods targeted by the goal.

Scope 3 Category 3 Base Year: Emissions (CO2-equivalent tons) from fuel and energy-related activities (not included in Scope 1 and 2) targeted by the goal.

Scope 3 Category 4 Base Year: Emissions (CO2-equivalent tons) from upstream logistics targeted by the goal.

Scope 3 Category 5 Base Year: Emissions (CO2-equivalent tons) from waste generated in operations targeted by the goal.

Scope 3 Category 6 Base Year: Emissions (CO2-equivalent tons) from business travel targeted by the goal.

Scope 3 Category 7 Base Year: Emissions (CO2-equivalent tons) from employee commuting targeted by the goal.

Scope 3 Category 8 Base Year: Emissions (CO2-equivalent tons) from upstream leased assets targeted by the goal.

Scope 3 Category 9 Base Year: Emissions (CO2-equivalent tons) from downstream logistics targeted by the goal.

Scope 3 Category 10 Base Year: Emissions (CO2-equivalent tons) from processing of sold products targeted by the goal.

Scope 3 Category 11 Base Year: Emissions (CO2-equivalent tons) from use of sold products targeted by the goal.

Scope 3 Category 12 Base Year: Emissions (CO2-equivalent tons) from end-of-life treatment of sold products targeted by the goal.

Scope 3 Category 13 Base Year: Emissions (CO2 equivalent tons) from downstream leased assets targeted for the goal.

Scope 3 Category 14 Base Year: Emissions (CO2 equivalent tons) from franchises targeted for the goal.

Scope 3 Category 15 Base Year: Emissions (CO2 equivalent tons) from investments targeted for the goal.

Base Year Scope 3 Other (Upstream) Emissions targeted for the goal (CO2 equivalent tons)

Base Year Scope 3 Other (Downstream) Emissions targeted for the goal (CO2 equivalent tons)

Total emissions from Scope 3 in the base year targeted for the goals (CO2 equivalent tons).

Total base year emissions for all selected scopes targeted for the goals (CO2 equivalent tons).

377,500

Proportion of base year Scope 1 emissions targeted for the goals among the total base year Scope 1 emissions.

100

Proportion of base year Scope 2 emissions targeted for the goals among the total base year Scope 2 emissions.

100

Scope 3 Category 1 Base Year: The proportion of emissions from purchased goods and services targeted for the goals, among the total emissions in the Scope 3 Category 1 base year: Purchased goods and services (CO2 equivalent tons).

Scope 3 Category 2 Base Year: The proportion of emissions from capital goods targeted for the goals, among the total emissions in the Scope Category 2 base year: Capital goods (CO2 equivalent tons).

Scope 3 Category 3 Base Year: The proportion of emissions from fuel and energy-related activities (not included in Scope 1 and 2) targeted for the goals,

among the total emissions in the Scope 3 Category 3 base year: Fuel and energy-related activities (not included in Scope 1 and 2) (CO2 equivalent tons).

Scope 3 Category 4 Base Year: The proportion of emissions from upstream logistics targeted by the objectives, among the total emissions in the Scope 3 Category 4 base year: Upstream logistics (CO2 equivalent tons).

Scope 3 Category 5 Base Year: The proportion of emissions from waste generated in operations targeted for the goals, among the total emissions in the Scope 3 Category 5 base year: Waste generated in operations (CO2 equivalent tons).

Scope 3 Category 6 Base Year: The proportion of emissions from business travel targeted for the goals, among the total emissions in the Scope 3 Category 6 base year: Business travel (CO2 equivalent tons).

Scope 3 Category 7 Base Year: The proportion of emissions from employee commuting targeted for the goals, among the total emissions in the Scope 3 Category 7 base year: Employee commuting (CO2 equivalent tons).

Scope 3 Category 8 Base Year: The proportion of emissions from upstream leased assets targeted for the goals, among the total emissions in the Scope 3 Category 8 base year: Upstream leased assets (CO2 equivalent tons).

Scope 3 Category 9 Base Year: The proportion of emissions from downstream logistics targeted for the goals, among the total emissions in the Scope 3 Category 9 base year: Downstream logistics (CO2 equivalent tons).

Scope 3 Category 10 Base Year: The proportion of emissions from processing of sold products targeted for the goals, among the total emissions in the Scope 3 Category 10 base year: Processing of sold products (CO2 equivalent tons).

Scope 3 Category 11 Base Year: The proportion of emissions from the use of sold products targeted for the goals, among the total emissions in the Scope 3 Category 11 base year: Use of sold products (CO2 equivalent tons).

Scope 3 Category 12 Base Year: The proportion of emissions from the disposal of sold products targeted for the goals, among the total emissions in the Scope 3 Category 12 base year: Disposal of sold products (CO2 equivalent tons).

Scope 3 Category 13 Base Year: The proportion of emissions from downstream leased assets targeted for the goals, among the total emissions in the Scope 3 Category 13 base year: Downstream leased assets (CO2 equivalent tons).

Scope 3 Category 14 Base Year: The proportion of emissions from franchises targeted for the goals, among the total emissions in the Scope 3 Category 14 base year: Franchises (CO2 equivalent tons).

Scope 3 Category 15 Base Year: The proportion of emissions from investments targeted for the goals, among the total emissions in the Scope 3 Category 15 base year: Investments (CO2 equivalent tons).

Among the total emissions in the base year for Scope 3 Other (Upstream), the proportion of emissions from Scope 3 Other (Upstream) in the base year targeted for the goals (CO2 equivalent tons).

Among the total emissions in the base year for Scope 3 Other (Downstream), the proportion of emissions from Scope 3 Other (Downstream) in the base year targeted for the goals (CO2 equivalent tons).

Proportion of baseline total emissions for Scope 3 that represents the baseline emissions for the selected Scope 3 targets (all Scope 3 categories)

Proportion of selected Scope's baseline total emissions that represent the baseline emissions for the selected Scope's targets.

100

Target year

2023

Percentage reduction from baseline year (%)

12.6

Total emissions for the target year for all selected Scopes (CO2 equivalent tons) [Automatically calculated]

329,935

Scope 1 emissions for the reporting year, which are the target for the goal (CO2 equivalent tons)

283,753

Scope 2 emissions for the reporting year, which are the target for the goal (CO2 equivalent tons)

46,179

Scope 3 Category 1: Emissions from purchased goods and services in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 2: Emissions from capital goods in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 3: Emissions from fuel and energy-related activities in the reporting year that are the target of the goal and not included in Scope 1 and 2 (CO2 equivalent tons)

Scope 3 Category 4: Emissions from upstream logistics in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 5: Emissions from waste generated in operations in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 6: Emissions from business travel in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 7: Emissions from employee commuting in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 8: Emissions from upstream leased assets in the reporting year that are within the target scope (CO2 equivalent tons)

Scope 3 Category 9: Emissions from downstream logistics in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 10: Emissions from processing of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 11: Emissions from the use of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 12: Emissions from the disposal of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 13: Emissions from downstream leased assets in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 14: Emissions from franchises in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 15: Emissions from investments in the reporting year that are the target of the goal (CO2 equivalent tons)

Emissions from Scope 3 Other (Upstream) in the reporting year that are the target of the goal (CO2 equivalent tons)

Emissions from Scope 3 Other (Downstream) in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 emissions for the reporting year that are the target of the goal (CO2 equivalent tons)

The total emissions (in CO2 equivalent tons) for the reporting year, targeting all selected scopes' goals.

329,932

Is land-related emission included in this goal?

No, land-related emissions are not included (e.g., non-FLAG SBT)

Percentage of Goal Achieved for the Base Year [auto-calculated]

100.0063071586

Status of the Goal for the Reporting Year

Achieved

Explain the scope of the goal and specify exclusions.

Short-term goal: "Established by the Board of Directors for the fiscal year 2022 (April 1, 2022 - March 31, 2023), with a 12.6% reduction compared to fiscal year 2019

Plan to achieve the goal and progress made at the end of the reporting year.

List the emission reduction initiatives that contributed most to achieving the goal.

- Introduction of diesel substitute fuel
- Reduction of fuel consumption through the promotion of ICT-based efficiency in construction work
- Transition to renewable energy

Target reference number

Abs 2

Is this based on scientific evidence？

Yes, this target has received approval from the Science-Based Targets initiative (SBTi), which is based on scientific evidence.

Ambition level of the goal

Aligned with the 1.5°C target

Year of Target Implementation
2022

Target coverage
Company-wide

Scope(s)
Scope3

Scope 2 accounting method

Scope 3 category(ies)
Category 1: Purchased goods and services
Category 11: Use of sold products

Base year
2020
Base year Scope 1 emissions targeted by the goals (metric tons CO2e)

Base year Scope 2 emissions targeted by the goals (metric tons CO2e)

Scope 3 Category 1 Base Year: Emissions (CO2-equivalent tons) from purchased goods and services targeted by the goal.
1,741,300
Scope 3 Category 2 Base Year: Emissions (CO2-equivalent tons) from capital goods targeted by the goal.

Scope 3 Category 3 Base Year: Emissions (CO2-equivalent tons) from fuel and energy-related activities (not included in Scope 1 and 2) targeted by the goal.

Scope 3 Category 4 Base Year: Emissions (CO2-equivalent tons) from upstream logistics targeted by the goal.

Scope 3 Category 5 Base Year: Emissions (CO2-equivalent tons) from waste generated in operations targeted by the goal.

Scope 3 Category 6 Base Year: Emissions (CO2-equivalent tons) from business travel targeted by the goal.

Scope 3 Category 7 Base Year: Emissions (CO2-equivalent tons) from employee commuting targeted by the goal.

Scope 3 Category 8 Base Year: Emissions (CO2-equivalent tons) from upstream leased assets targeted by the goal.

Scope 3 Category 9 Base Year: Emissions (CO2-equivalent tons) from downstream logistics targeted by the goal.

Scope 3 Category 10 Base Year: Emissions (CO2-equivalent tons) from processing of sold products targeted by the goal.

Scope 3 Category 11 Base Year: Emissions (CO2-equivalent tons) from use of sold products targeted by the goal.
2,847,100
Scope 3 Category 12 Base Year: Emissions (CO2-equivalent tons) from end-of-life treatment of sold products targeted by the goal.

Scope 3 Category 13 Base Year: Emissions (CO2 equivalent tons) from downstream leased assets targeted for the goal.

Scope 3 Category 14 Base Year: Emissions (CO2 equivalent tons) from franchises targeted for the goal.

Scope 3 Category 15 Base Year: Emissions (CO2 equivalent tons) from investments targeted for the goal.

Base Year Scope 3 Other (Upstream) Emissions targeted for the goal (CO2 equivalent tons)

Base Year Scope 3 Other (Downstream) Emissions targeted for the goal (CO2 equivalent tons)

Total emissions from Scope 3 in the base year targeted for the goals (CO2 equivalent tons).
4,588,400
Total base year emissions for all selected scopes targeted for the goals (CO2 equivalent tons).
4,588,400
Proportion of base year Scope 1 emissions targeted for the goals among the total base year Scope 1 emissions.

Proportion of base year Scope 2 emissions targeted for the goals among the total base year Scope 2 emissions.

Scope 3 Category 1 Base Year: The proportion of emissions from purchased goods and services targeted for the goals, among the total emissions in the Scope 3 Category 1 base year: Purchased goods and services (CO2 equivalent tons).

100

Scope 3 Category 2 Base Year: The proportion of emissions from capital goods targeted for the goals, among the total emissions in the Scope Category 2 base year: Capital goods (CO2 equivalent tons).

Scope 3 Category 3 Base Year: The proportion of emissions from fuel and energy-related activities (not included in Scope 1 and 2) targeted for the goals, among the total emissions in the Scope 3 Category 3 base year: Fuel and energy-related activities (not included in Scope 1 and 2) (CO2 equivalent tons).

Scope 3 Category 4 Base Year: The proportion of emissions from upstream logistics targeted by the objectives, among the total emissions in the Scope 3 Category 4 base year: Upstream logistics (CO2 equivalent tons).

Scope 3 Category 5 Base Year: The proportion of emissions from waste generated in operations targeted for the goals, among the total emissions in the Scope 3 Category 5 base year: Waste generated in operations (CO2 equivalent tons).

Scope 3 Category 6 Base Year: The proportion of emissions from business travel targeted for the goals, among the total emissions in the Scope 3 Category 6 base year: Business travel (CO2 equivalent tons).

Scope 3 Category 7 Base Year: The proportion of emissions from employee commuting targeted for the goals, among the total emissions in the Scope 3 Category 7 base year: Employee commuting (CO2 equivalent tons).

Scope 3 Category 8 Base Year: The proportion of emissions from upstream leased assets targeted for the goals, among the total emissions in the Scope 3 Category 8 base year: Upstream leased assets (CO2 equivalent tons).

Scope 3 Category 9 Base Year: The proportion of emissions from downstream logistics targeted for the goals, among the total emissions in the Scope 3 Category 9 base year: Downstream logistics (CO2 equivalent tons).

Scope 3 Category 10 Base Year: The proportion of emissions from processing of sold products targeted for the goals, among the total emissions in the Scope 3 Category 10 base year: Processing of sold products (CO2 equivalent tons).

Scope 3 Category 11 Base Year: The proportion of emissions from the use of sold products targeted for the goals, among the total emissions in the Scope 3 Category 11 base year: Use of sold products (CO2 equivalent tons).

100

Scope 3 Category 12 Base Year: The proportion of emissions from the disposal of sold products targeted for the goals, among the total emissions in the Scope 3 Category 12 base year: Disposal of sold products (CO2 equivalent tons).

Scope 3 Category 13 Base Year: The proportion of emissions from downstream leased assets targeted for the goals, among the total emissions in the Scope 3 Category 13 base year: Downstream leased assets (CO2 equivalent tons).

Scope 3 Category 14 Base Year: The proportion of emissions from franchises targeted for the goals, among the total emissions in the Scope 3 Category 14 base year: Franchises (CO2 equivalent tons).

Scope 3 Category 15 Base Year: The proportion of emissions from investments targeted for the goals, among the total emissions in the Scope 3 Category 15 base year: Investments (CO2 equivalent tons).

Among the total emissions in the base year for Scope 3 Other (Upstream), the proportion of emissions from Scope 3 Other (Upstream) in the base year targeted for the goals (CO2 equivalent tons).

Among the total emissions in the base year for Scope 3 Other (Downstream), the proportion of emissions from Scope 3 Other (Downstream) in the base year targeted for the goals (CO2 equivalent tons).

Proportion of baseline total emissions for Scope 3 that represents the baseline emissions for the selected Scope 3 targets (all Scope 3 categories)

100

Proportion of selected Scope's baseline total emissions that represent the baseline emissions for the selected Scope's targets.

100

Target year

2023

Percentage reduction from baseline year (%)

7.5

Total emissions for the target year for all selected Scopes (CO2 equivalent tons) [Automatically calculated]

4,244,270

Scope 1 emissions for the reporting year, which are the target for the goal (CO2 equivalent tons)

Scope 2 emissions for the reporting year, which are the target for the goal (CO2 equivalent tons)

Scope 3 Category 1: Emissions from purchased goods and services in the reporting year that are the target of the goal (CO2 equivalent tons)

1,779,778

Scope 3 Category 2: Emissions from capital goods in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 3: Emissions from fuel and energy-related activities in the reporting year that are the target of the goal and not included in Scope 1 and 2 (CO2 equivalent tons)

Scope 3 Category 4: Emissions from upstream logistics in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 5: Emissions from waste generated in operations in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 6: Emissions from business travel in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 7: Emissions from employee commuting in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 8: Emissions from upstream leased assets in the reporting year that are within the target scope (CO2 equivalent tons)

Scope 3 Category 9: Emissions from downstream logistics in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 10: Emissions from processing of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 11: Emissions from the use of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)

1,187,833

Scope 3 Category 12: Emissions from the disposal of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 13: Emissions from downstream leased assets in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 14: Emissions from franchises in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 15: Emissions from investments in the reporting year that are the target of the goal (CO2 equivalent tons)

Emissions from Scope 3 Other (Upstream) in the reporting year that are the target of the goal (CO2 equivalent tons)

Emissions from Scope 3 Other (Downstream) in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 emissions for the reporting year that are the target of the goal (CO2 equivalent tons)
2,967,611
The total emissions (in CO2 equivalent tons) for the reporting year, targeting all selected scopes' goals.
2,967,611
Is land-related emission included in this goal?
No, land-related emissions are not included (e.g., non-FLAG SBT)
Percentage of Goal Achieved for the Base Year [auto-calculated]
470.9816057885
Status of the Goal for the Reporting Year
Achieved
Explain the scope of the goal and specify exclusions.
Short-term goal: "Established by the Board of Directors for the fiscal year 2022 (April 1, 2022 - March 31, 2023), with a 7.5% reduction compared to fiscal year 2019
Plan to achieve the goal and progress made at the end of the reporting year.

List the emission reduction initiatives that contributed most to achieving the goal.

- Promotion and Expansion of ZEB and ZEH-M

Target reference number
Abs 3

Is this based on scientific evidence？

Yes, this target has received approval from the Science-Based Targets initiative (SBTi), which is based on scientific evidence.

Ambition level of the goal

Aligned with the 1.5°C target

Year of Target Implementation

2022

Target coverage

Company-wide

Scope(s)

Scope1

Scope2

Scope 2 accounting method

Market standards

Scope 3 category(ies)

Base year

2020

Base year Scope 1 emissions targeted by the goals (metric tons CO2e)

258,800

Base year Scope 2 emissions targeted by the goals (metric tons CO2e)

118,700

Scope 3 Category 1 Base Year: Emissions (CO2-equivalent tons) from purchased goods and services targeted by the goal.

Scope 3 Category 2 Base Year: Emissions (CO2-equivalent tons) from capital goods targeted by the goal.

Scope 3 Category 3 Base Year: Emissions (CO2-equivalent tons) from fuel and energy-related activities (not included in Scope 1 and 2) targeted by the goal.

Scope 3 Category 4 Base Year: Emissions (CO2-equivalent tons) from upstream logistics targeted by the goal.

Scope 3 Category 5 Base Year: Emissions (CO2-equivalent tons) from waste generated in operations targeted by the goal.

Scope 3 Category 6 Base Year: Emissions (CO2-equivalent tons) from business travel targeted by the goal.

Scope 3 Category 7 Base Year: Emissions (CO2-equivalent tons) from employee commuting targeted by the goal.

Scope 3 Category 8 Base Year: Emissions (CO2-equivalent tons) from upstream leased assets targeted by the goal.

Scope 3 Category 9 Base Year: Emissions (CO2-equivalent tons) from downstream logistics targeted by the goal.

Scope 3 Category 10 Base Year: Emissions (CO2-equivalent tons) from processing of sold products targeted by the goal.

Scope 3 Category 11 Base Year: Emissions (CO2-equivalent tons) from use of sold products targeted by the goal.

Scope 3 Category 12 Base Year: Emissions (CO2-equivalent tons) from end-of-life treatment of sold products targeted by the goal.

Scope 3 Category 13 Base Year: Emissions (CO2 equivalent tons) from downstream leased assets targeted for the goal.

Scope 3 Category 14 Base Year: Emissions (CO2 equivalent tons) from franchises targeted for the goal.

Scope 3 Category 15 Base Year: Emissions (CO2 equivalent tons) from investments targeted for the goal.

Base Year Scope 3 Other (Upstream) Emissions targeted for the goal (CO2 equivalent tons)

Base Year Scope 3 Other (Downstream) Emissions targeted for the goal (CO2 equivalent tons)

Total emissions from Scope 3 in the base year targeted for the goals (CO2 equivalent tons).

Total base year emissions for all selected scopes targeted for the goals (CO2 equivalent tons).

377,500

Proportion of base year Scope 1 emissions targeted for the goals among the total base year Scope 1 emissions.

100

Proportion of base year Scope 2 emissions targeted for the goals among the total base year Scope 2 emissions.

100

Scope 3 Category 1 Base Year: The proportion of emissions from purchased goods and services targeted for the goals, among the total emissions in the Scope 3 Category 1 base year: Purchased goods and services (CO2 equivalent tons).

Scope 3 Category 2 Base Year: The proportion of emissions from capital goods targeted for the goals, among the total emissions in the Scope Category 2 base year: Capital goods (CO2 equivalent tons).

Scope 3 Category 3 Base Year: The proportion of emissions from fuel and energy-related activities (not included in Scope 1 and 2) targeted for the goals, among the total emissions in the Scope 3 Category 3 base year: Fuel and energy-related activities (not included in Scope 1 and 2) (CO2 equivalent tons).

Scope 3 Category 4 Base Year: The proportion of emissions from upstream logistics targeted by the objectives, among the total emissions in the Scope 3 Category 4 base year: Upstream logistics (CO2 equivalent tons).

Scope 3 Category 5 Base Year: The proportion of emissions from waste generated in operations targeted for the goals, among the total emissions in the Scope 3 Category 5 base year: Waste generated in operations (CO2 equivalent tons).

Scope 3 Category 6 Base Year: The proportion of emissions from business travel targeted for the goals, among the total emissions in the Scope 3 Category 6 base year: Business travel (CO2 equivalent tons).

Scope 3 Category 7 Base Year: The proportion of emissions from employee commuting targeted for the goals, among the total emissions in the Scope 3 Category 7 base year: Employee commuting (CO2 equivalent tons).

Scope 3 Category 8 Base Year: The proportion of emissions from upstream leased assets targeted for the goals, among the total emissions in the Scope 3 Category 8 base year: Upstream leased assets (CO2 equivalent tons).

Scope 3 Category 9 Base Year: The proportion of emissions from downstream logistics targeted for the goals, among the total emissions in the Scope 3 Category 9 base year: Downstream logistics (CO2 equivalent tons).

Scope 3 Category 10 Base Year: The proportion of emissions from processing of sold products targeted for the goals, among the total emissions in the Scope 3 Category 10 base year: Processing of sold products (CO2 equivalent tons).

Scope 3 Category 11 Base Year: The proportion of emissions from the use of sold products targeted for the goals, among the total emissions in the Scope 3 Category 11 base year: Use of sold products (CO2 equivalent tons).

100

Scope 3 Category 12 Base Year: The proportion of emissions from the disposal of sold products targeted for the goals, among the total emissions in the Scope 3 Category 12 base year: Disposal of sold products (CO2 equivalent tons).

Scope 3 Category 13 Base Year: The proportion of emissions from downstream leased assets targeted for the goals, among the total emissions in the Scope 3 Category 13 base year: Downstream leased assets (CO2 equivalent tons).

Scope 3 Category 14 Base Year: The proportion of emissions from franchises targeted for the goals, among the total emissions in the Scope 3 Category 14 base year: Franchises (CO2 equivalent tons).

Scope 3 Category 15 Base Year: The proportion of emissions from investments targeted for the goals, among the total emissions in the Scope 3 Category 15 base year: Investments (CO2 equivalent tons).

Among the total emissions in the base year for Scope 3 Other (Upstream), the proportion of emissions from Scope 3 Other (Upstream) in the base year targeted for the goals (CO2 equivalent tons).

Among the total emissions in the base year for Scope 3 Other (Downstream), the proportion of emissions from Scope 3 Other (Downstream) in the base year targeted for the goals (CO2 equivalent tons).

Proportion of baseline total emissions for Scope 3 that represents the baseline emissions for the selected Scope 3 targets (all Scope 3 categories)

Proportion of selected Scope's baseline total emissions that represent the baseline emissions for the selected Scope's targets.

100

Target year
2031
Percentage reduction from baseline year (%)
46.2
Total emissions for the target year for all selected Scopes (CO2 equivalent tons) [Automatically calculated]
203,095
Scope 1 emissions for the reporting year, which are the target for the goal (CO2 equivalent tons)
283,753
Scope 2 emissions for the reporting year, which are the target for the goal (CO2 equivalent tons)
46,179
Scope 3 Category 1: Emissions from purchased goods and services in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 2: Emissions from capital goods in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 3: Emissions from fuel and energy-related activities in the reporting year that are the target of the goal and not included in Scope 1 and 2 (CO2 equivalent tons)

Scope 3 Category 4: Emissions from upstream logistics in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 5: Emissions from waste generated in operations in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 6: Emissions from business travel in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 7: Emissions from employee commuting in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 8: Emissions from upstream leased assets in the reporting year that are within the target scope (CO2 equivalent tons)

Scope 3 Category 9: Emissions from downstream logistics in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 10: Emissions from processing of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 11: Emissions from the use of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 12: Emissions from the disposal of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 13: Emissions from downstream leased assets in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 14: Emissions from franchises in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 15: Emissions from investments in the reporting year that are the target of the goal (CO2 equivalent tons)

Emissions from Scope 3 Other (Upstream) in the reporting year that are the target of the goal (CO2 equivalent tons)

Emissions from Scope 3 Other (Downstream) in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 emissions for the reporting year that are the target of the goal (CO2 equivalent tons)

The total emissions (in CO2 equivalent tons) for the reporting year, targeting all selected scopes' goals.

329,932

Is land-related emission included in this goal?

No, land-related emissions are not included (e.g., non-FLAG SBT)

Percentage of Goal Achieved for the Base Year [auto-calculated]

27.2744474069

Status of the Goal for the Reporting Year

Under configuration

Explain the scope of the goal and specify exclusions.

Mid-term goal: Established by the Board of Directors in accordance with the mid-term management plan, aiming for a "46.2% reduction by the fiscal year 2030 (April 1, 2030, to March 31, 2031)."

Plan to achieve the goal and progress made at the end of the reporting year.

- Introduction of alternative diesel fuels

- Reduction of fuel consumption through the promotion of ICT automation in construction
- Development and practical use of energy-efficient construction methods
- Fuel-efficient construction machinery, and electrification of construction machinery
- Transition to renewable energy.

List the emission reduction initiatives that contributed most to achieving the goal.

Target reference number

Abs 4

Is this based on scientific evidence？

Yes, this target has received approval from the Science-Based Targets initiative (SBTi), which is based on scientific evidence.

Ambition level of the goal

Aligned with the 1.5°C target

Year of Target Implementation

2022

Target coverage

Company-wide

Scope(s)

Scope3

Scope 2 accounting method

Scope 3 category(ies)

Category 1: Purchased goods and services
Category 11: Use of sold products

Base year

2020

Base year Scope 1 emissions targeted by the goals (metric tons CO2e)

Base year Scope 2 emissions targeted by the goals (metric tons CO2e)

Scope 3 Category 1 Base Year: Emissions (CO2-equivalent tons) from purchased goods and services targeted by the goal.
1,741,300
Scope 3 Category 2 Base Year: Emissions (CO2-equivalent tons) from capital goods targeted by the goal.

Scope 3 Category 3 Base Year: Emissions (CO2-equivalent tons) from fuel and energy-related activities (not included in Scope 1 and 2) targeted by the goal.

Scope 3 Category 4 Base Year: Emissions (CO2-equivalent tons) from upstream logistics targeted by the goal.

Scope 3 Category 5 Base Year: Emissions (CO2-equivalent tons) from waste generated in operations targeted by the goal.

Scope 3 Category 6 Base Year: Emissions (CO2-equivalent tons) from business travel targeted by the goal.

Scope 3 Category 7 Base Year: Emissions (CO2-equivalent tons) from employee commuting targeted by the goal.

Scope 3 Category 8 Base Year: Emissions (CO2-equivalent tons) from upstream leased assets targeted by the goal.

Scope 3 Category 9 Base Year: Emissions (CO2-equivalent tons) from downstream logistics targeted by the goal.

Scope 3 Category 10 Base Year: Emissions (CO2-equivalent tons) from processing of sold products targeted by the goal.

Scope 3 Category 11 Base Year: Emissions (CO2-equivalent tons) from use of sold products targeted by the goal.

Scope 3 Category 12 Base Year: Emissions (CO2-equivalent tons) from end-of-life treatment of sold products targeted by the goal.

Scope 3 Category 13 Base Year: Emissions (CO2 equivalent tons) from downstream leased assets targeted for the goal.

Scope 3 Category 14 Base Year: Emissions (CO2 equivalent tons) from franchises targeted for the goal.

Scope 3 Category 15 Base Year: Emissions (CO2 equivalent tons) from investments targeted for the goal.

Base Year Scope 3 Other (Upstream) Emissions targeted for the goal (CO2 equivalent tons)

Base Year Scope 3 Other (Downstream) Emissions targeted for the goal (CO2 equivalent tons)

Total emissions from Scope 3 in the base year targeted for the goals (CO2 equivalent tons).
4,588,400
Total base year emissions for all selected scopes targeted for the goals (CO2 equivalent tons).
4,588,400
Proportion of base year Scope 1 emissions targeted for the goals among the total base year Scope 1 emissions.

Proportion of base year Scope 2 emissions targeted for the goals among the total base year Scope 2 emissions.

Scope 3 Category 1 Base Year: The proportion of emissions from purchased goods and services targeted for the goals, among the total emissions in the Scope 3 Category 1 base year: Purchased goods and services (CO2 equivalent tons).
100
Scope 3 Category 2 Base Year: The proportion of emissions from capital goods targeted for the goals, among the total emissions in the Scope Category 2 base year: Capital goods (CO2 equivalent tons).

Scope 3 Category 3 Base Year: The proportion of emissions from fuel and energy-related activities (not included in Scope 1 and 2) targeted for the goals, among the total emissions in the Scope 3 Category 3 base year: Fuel and energy-related activities (not included in Scope 1 and 2) (CO2 equivalent tons).

Scope 3 Category 4 Base Year: The proportion of emissions from upstream logistics targeted by the objectives, among the total emissions in the Scope 3 Category 4 base year: Upstream logistics (CO2 equivalent tons).

Scope 3 Category 5 Base Year: The proportion of emissions from waste generated in operations targeted for the goals, among the total emissions in the Scope 3 Category 5 base year: Waste generated in operations (CO2 equivalent tons).

Scope 3 Category 6 Base Year: The proportion of emissions from business travel targeted for the goals, among the total emissions in the Scope 3 Category 6 base year: Business travel (CO2 equivalent tons).

Scope 3 Category 7 Base Year: The proportion of emissions from employee commuting targeted for the goals, among the total emissions in the Scope 3 Category 7 base year: Employee commuting (CO2 equivalent tons).

Scope 3 Category 8 Base Year: The proportion of emissions from upstream leased assets targeted for the goals, among the total emissions in the Scope 3 Category 8 base year: Upstream leased assets (CO2 equivalent tons).

Scope 3 Category 9 Base Year: The proportion of emissions from downstream logistics targeted for the goals, among the total emissions in the Scope 3 Category 9 base year: Downstream logistics (CO2 equivalent tons).

Scope 3 Category 10 Base Year: The proportion of emissions from processing of sold products targeted for the goals, among the total emissions in the Scope 3 Category 10 base year: Processing of sold products (CO2 equivalent tons).

Scope 3 Category 11 Base Year: The proportion of emissions from the use of sold products targeted for the goals, among the total emissions in the Scope 3 Category 11 base year: Use of sold products (CO2 equivalent tons).

100

Scope 3 Category 12 Base Year: The proportion of emissions from the disposal of sold products targeted for the goals, among the total emissions in the Scope 3 Category 12 base year: Disposal of sold products (CO2 equivalent tons).

Scope 3 Category 13 Base Year: The proportion of emissions from downstream leased assets targeted for the goals, among the total emissions in the Scope 3 Category 13 base year: Downstream leased assets (CO2 equivalent tons).

Scope 3 Category 14 Base Year: The proportion of emissions from franchises targeted for the goals, among the total emissions in the Scope 3 Category 14 base year: Franchises (CO2 equivalent tons).

Scope 3 Category 15 Base Year: The proportion of emissions from investments targeted for the goals, among the total emissions in the Scope 3 Category 15 base year: Investments (CO2 equivalent tons).

Among the total emissions in the base year for Scope 3 Other (Upstream), the proportion of emissions from Scope 3 Other (Upstream) in the base year targeted for the goals (CO2 equivalent tons).

Among the total emissions in the base year for Scope 3 Other (Downstream), the proportion of emissions from Scope 3 Other (Downstream) in the base year targeted for the goals (CO2 equivalent tons).

Proportion of baseline total emissions for Scope 3 that represents the baseline emissions for the selected Scope 3 targets (all Scope 3 categories)
100
Proportion of selected Scope's baseline total emissions that represent the baseline emissions for the selected Scope's targets.
100
Target year
2031
Percentage reduction from baseline year (%)
27.5
Total emissions for the target year for all selected Scopes (CO2 equivalent tons) [Automatically calculated]
3,326,590
Scope 1 emissions for the reporting year, which are the target for the goal (CO2 equivalent tons)

Scope 2 emissions for the reporting year, which are the target for the goal (CO2 equivalent tons)

Scope 3 Category 1: Emissions from purchased goods and services in the reporting year that are the target of the goal (CO2 equivalent tons)
1,779,778
Scope 3 Category 2: Emissions from capital goods in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 3: Emissions from fuel and energy-related activities in the reporting year that are the target of the goal and not included in Scope 1 and 2 (CO2 equivalent tons)

Scope 3 Category 4: Emissions from upstream logistics in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 5: Emissions from waste generated in operations in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 6: Emissions from business travel in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 7: Emissions from employee commuting in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 8: Emissions from upstream leased assets in the reporting year that are within the target scope (CO2 equivalent tons)

Scope 3 Category 9: Emissions from downstream logistics in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 10: Emissions from processing of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 11: Emissions from the use of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)
1,187,833
Scope 3 Category 12: Emissions from the disposal of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 13: Emissions from downstream leased assets in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 14: Emissions from franchises in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 Category 15: Emissions from investments in the reporting year that are the target of the goal (CO2 equivalent tons)

Emissions from Scope 3 Other (Upstream) in the reporting year that are the target of the goal (CO2 equivalent tons)

Emissions from Scope 3 Other (Downstream) in the reporting year that are the target of the goal (CO2 equivalent tons)

Scope 3 emissions for the reporting year that are the target of the goal (CO2 equivalent tons)
2,967,611
The total emissions (in CO2 equivalent tons) for the reporting year, targeting all selected scopes' goals.

2,967,611

Is land-related emission included in this goal?

No, land-related emissions are not included (e.g., non-FLAG SBT)

Percentage of Goal Achieved for the Base Year [auto-calculated]

128.4495288514

Status of the Goal for the Reporting Year

Achieved

Explain the scope of the goal and specify exclusions.

Mid-term goal: Established by the Board of Directors in accordance with the mid-term management plan, aiming for a "27.5% reduction by the fiscal year 2030 (April 1, 2030, to March 31, 2031)."

Plan to achieve the goal and progress made at the end of the reporting year.

List the emission reduction initiatives that contributed most to achieving the goal.

- Promotion and expansion of ZEB and ZEH-M
- Utilization of low-carbon materials (such as the promotion of wooden and timber construction).

Target reference number

Abs 5

Is this based on scientific evidence？

No, but we are reporting goals based on different scientific evidence.

Ambition level of the goal

Year of Target Implementation

2022

Target coverage

Company-wide

Scope(s)

Scope1
Scope2
Scope3

Scope 2 accounting method

Market standards

Scope 3 category(ies)

Category 1: Purchased Goods and Services
Category 2: Capital Goods
Category 3: Fuel and Energy-Related Activities (not included in Scope 1 and 2)
Category 4: Upstream Transportation and Logistics
Category 5: Waste Generated in Operations
Category 6: Business Travel
Category 7: Employee Commuting
Category 8: Upstream Leased Assets
Category 9: Downstream Transportation and Logistics
Category 10: Processing of Sold Products
Category 11: Use of Sold Products
Category 12: End-of-Life Treatment of Sold Products
Category 13: Downstream Leased Assets
Category 14: Franchises
Category 15: Investments
Other (Upstream)
Other (Downstream)

Base year

2020

Base year Scope 1 emissions targeted by the goals (metric tons CO2e)

258,800

Base year Scope 2 emissions targeted by the goals (metric tons CO2e)

118,700

Scope 3 Category 1 Base Year: Emissions (CO2-equivalent tons) from purchased goods and services targeted by the goal.

1,741,300

Scope 3 Category 2 Base Year: Emissions (CO2-equivalent tons) from capital goods targeted by the goal.

9,300

Scope 3 Category 3 Base Year: Emissions (CO2-equivalent tons) from fuel and energy-related activities (not included in Scope 1 and 2) targeted by the goal.

16,700

Scope 3 Category 4 Base Year: Emissions (CO2-equivalent tons) from upstream logistics targeted by the goal.

12,300

Scope 3 Category 5 Base Year: Emissions (CO2-equivalent tons) from waste generated in operations targeted by the goal.

129,900

Scope 3 Category 6 Base Year: Emissions (CO2-equivalent tons) from business travel targeted by the goal.

2,200

Scope 3 Category 7 Base Year: Emissions (CO2-equivalent tons) from employee commuting targeted by the goal.

25,900

Scope 3 Category 8 Base Year: Emissions (CO2-equivalent tons) from upstream leased assets targeted by the goal.

200

Scope 3 Category 9 Base Year: Emissions (CO2-equivalent tons) from downstream logistics targeted by the goal.

50,100

Scope 3 Category 10 Base Year: Emissions (CO2-equivalent tons) from processing of sold products targeted by the goal.

0

Scope 3 Category 11 Base Year: Emissions (CO2-equivalent tons) from use of sold products targeted by the goal.

2,847,100

Scope 3 Category 12 Base Year: Emissions (CO2-equivalent tons) from end-of-life treatment of sold products targeted by the goal.

45,200

Scope 3 Category 13 Base Year: Emissions (CO2 equivalent tons) from downstream leased assets targeted for the goal.

29,800

Scope 3 Category 14 Base Year: Emissions (CO2 equivalent tons) from franchises targeted for the goal.

0

Scope 3 Category 15 Base Year: Emissions (CO2 equivalent tons) from investments targeted for the goal.

0

Base Year Scope 3 Other (Upstream) Emissions targeted for the goal (CO2 equivalent tons)

0

Base Year Scope 3 Other (Downstream) Emissions targeted for the goal (CO2 equivalent tons)

0

Total emissions from Scope 3 in the base year targeted for the goals (CO2 equivalent tons).

4,910,000

Total base year emissions for all selected scopes targeted for the goals (CO2 equivalent tons).

5,287,500

Proportion of base year Scope 1 emissions targeted for the goals among the total base year Scope 1 emissions.
100
Proportion of base year Scope 2 emissions targeted for the goals among the total base year Scope 2 emissions.
100
Scope 3 Category 1 Base Year: The proportion of emissions from purchased goods and services targeted for the goals, among the total emissions in the Scope 3 Category 1 base year: Purchased goods and services (CO2 equivalent tons).
100
Scope 3 Category 2 Base Year: The proportion of emissions from capital goods targeted for the goals, among the total emissions in the Scope Category 2 base year: Capital goods (CO2 equivalent tons).
100
Scope 3 Category 3 Base Year: The proportion of emissions from fuel and energy-related activities (not included in Scope 1 and 2) targeted for the goals, among the total emissions in the Scope 3 Category 3 base year: Fuel and energy-related activities (not included in Scope 1 and 2) (CO2 equivalent tons).
100
Scope 3 Category 4 Base Year: The proportion of emissions from upstream logistics targeted by the objectives, among the total emissions in the Scope 3 Category 4 base year: Upstream logistics (CO2 equivalent tons).
100
Scope 3 Category 5 Base Year: The proportion of emissions from waste generated in operations targeted for the goals, among the total emissions in the Scope 3 Category 5 base year: Waste generated in operations (CO2 equivalent tons).
100
Scope 3 Category 6 Base Year: The proportion of emissions from business travel targeted for the goals, among the total emissions in the Scope 3 Category 6 base year: Business travel (CO2 equivalent tons).
100
Scope 3 Category 7 Base Year: The proportion of emissions from employee commuting targeted for the goals, among the total emissions in the Scope 3 Category 7 base year: Employee commuting (CO2 equivalent tons).
100
Scope 3 Category 8 Base Year: The proportion of emissions from upstream leased assets targeted for the goals, among the total emissions in the Scope 3 Category 8 base year: Upstream leased assets (CO2 equivalent tons).
100

Scope 3 Category 9 Base Year: The proportion of emissions from downstream logistics targeted for the goals, among the total emissions in the Scope 3 Category 9 base year: Downstream logistics (CO2 equivalent tons).
100
Scope 3 Category 10 Base Year: The proportion of emissions from processing of sold products targeted for the goals, among the total emissions in the Scope 3 Category 10 base year: Processing of sold products (CO2 equivalent tons).
100
Scope 3 Category 11 Base Year: The proportion of emissions from the use of sold products targeted for the goals, among the total emissions in the Scope 3 Category 11 base year: Use of sold products (CO2 equivalent tons).
100
Scope 3 Category 12 Base Year: The proportion of emissions from the disposal of sold products targeted for the goals, among the total emissions in the Scope 3 Category 12 base year: Disposal of sold products (CO2 equivalent tons).
100
Scope 3 Category 13 Base Year: The proportion of emissions from downstream leased assets targeted for the goals, among the total emissions in the Scope 3 Category 13 base year: Downstream leased assets (CO2 equivalent tons).
100
Scope 3 Category 14 Base Year: The proportion of emissions from franchises targeted for the goals, among the total emissions in the Scope 3 Category 14 base year: Franchises (CO2 equivalent tons).
100
Scope 3 Category 15 Base Year: The proportion of emissions from investments targeted for the goals, among the total emissions in the Scope 3 Category 15 base year: Investments (CO2 equivalent tons).
100
Among the total emissions in the base year for Scope 3 Other (Upstream), the proportion of emissions from Scope 3 Other (Upstream) in the base year targeted for the goals (CO2 equivalent tons).
100
Among the total emissions in the base year for Scope 3 Other (Downstream), the proportion of emissions from Scope 3 Other (Downstream) in the base year targeted for the goals (CO2 equivalent tons).
100
Proportion of baseline total emissions for Scope 3 that represents the baseline emissions for the selected Scope 3 targets (all Scope 3 categories)
100
Proportion of selected Scope's baseline total emissions that represent the baseline emissions for the selected Scope's targets.
100

Target year
2050
Percentage reduction from baseline year (%)
100
Total emissions for the target year for all selected Scopes (CO2 equivalent tons) [Automatically calculated]
0
Scope 1 emissions for the reporting year, which are the target for the goal (CO2 equivalent tons)
283,753
Scope 2 emissions for the reporting year, which are the target for the goal (CO2 equivalent tons)
46,179
Scope 3 Category 1: Emissions from purchased goods and services in the reporting year that are the target of the goal (CO2 equivalent tons)
1,779,778
Scope 3 Category 2: Emissions from capital goods in the reporting year that are the target of the goal (CO2 equivalent tons)
19,562
Scope 3 Category 3: Emissions from fuel and energy-related activities in the reporting year that are the target of the goal and not included in Scope 1 and 2 (CO2 equivalent tons)
46,068
Scope 3 Category 4: Emissions from upstream logistics in the reporting year that are the target of the goal (CO2 equivalent tons)
11,740
Scope 3 Category 5: Emissions from waste generated in operations in the reporting year that are the target of the goal (CO2 equivalent tons)
194,052
Scope 3 Category 6: Emissions from business travel in the reporting year that are the target of the goal (CO2 equivalent tons)
3,053
Scope 3 Category 7: Emissions from employee commuting in the reporting year that are the target of the goal (CO2 equivalent tons)
56,938
Scope 3 Category 8: Emissions from upstream leased assets in the reporting year that are within the target scope (CO2 equivalent tons)
408
Scope 3 Category 9: Emissions from downstream logistics in the reporting year that are the target of the goal (CO2 equivalent tons)
79,973

Scope 3 Category 10: Emissions from processing of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)
0
Scope 3 Category 11: Emissions from the use of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)
1,187,833
Scope 3 Category 12: Emissions from the disposal of sold products in the reporting year that are the target of the goal (CO2 equivalent tons)
50,031
Scope 3 Category 13: Emissions from downstream leased assets in the reporting year that are the target of the goal (CO2 equivalent tons)
24,677
Scope 3 Category 14: Emissions from franchises in the reporting year that are the target of the goal (CO2 equivalent tons)
0
Scope 3 Category 15: Emissions from investments in the reporting year that are the target of the goal (CO2 equivalent tons)
0
Emissions from Scope 3 Other (Upstream) in the reporting year that are the target of the goal (CO2 equivalent tons)
0
Emissions from Scope 3 Other (Downstream) in the reporting year that are the target of the goal (CO2 equivalent tons)
0
Scope 3 emissions for the reporting year that are the target of the goal (CO2 equivalent tons)
3,454,113
The total emissions (in CO2 equivalent tons) for the reporting year, targeting all selected scopes' goals.
3,784,045
Is land-related emission included in this goal?
No, land-related emissions are not included (e.g., non-FLAG SBT)
Percentage of Goal Achieved for the Base Year [auto-calculated]
28.4341371158
Status of the Goal for the Reporting Year
Under configuration
Explain the scope of the goal and specify exclusions.
Long-term goal: "Aiming to achieve carbon neutrality by the fiscal year 2050 (April 1, 2050, to March 31, 2051)."
Plan to achieve the goal and progress made at the end of the reporting year.
- Introduction of alternative fuels to replace diesel.
- Reduction of fuel consumption through the promotion of ICT-enabled efficiency in construction.

- Transition to renewable energy.
- Promotion and expansion of Zero Energy Buildings (ZEB) and Zero Energy Houses - Multi (ZEH-M).
- Utilization of low-carbon materials (such as the promotion of wooden and timber construction).
- Promotion of technology development contributing to decarbonization.

List the emission reduction initiatives that contributed most to achieving the goal.

C4.2

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

Net-zero target(s)

C4.2c

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

Target reference number

NZ1

Target coverage

Company-wide

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

Abs5

Target year for achieving net zero

2050

Is this a science-based target?

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

Please explain target coverage and identify any exclusions

The scope of the program is company-wide.

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)

In the long-term vision "Obayashi Sustainability Vision 2050" formulated in 2019, we continued the goal-setting from the previous environmental vision, "Obayashi Green Vision 2050" (established in 2011). By cross-referencing and scrutinizing the goal-setting method with the SBT (Science-Based Targets) criteria, we established the targets and obtained SBT certification in October 2022.

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.

Stage of development	Number of initiatives	Total estimated annual CO2e savings in metric tons CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	0	0
Implemented*	4	53,008.2
Not to be implemented	0	0

C4.3b

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

Initiative category and Initiative type

Energy efficiency in production processes
Machine/equipment replacement

Estimated annual CO2e savings (metric tons CO2e)

2,290

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

Scope 2 (market-based)

Voluntary/ Mandatory

Voluntary

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

89,488,000

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

60,000,000

Payback period

4-10 years

Estimated lifetime of the initiative

21-30 years

Comment

LED

Initiative category and Initiative type

Energy efficiency in production processes

Process optimization

Estimated annual CO2e savings (metric tons CO2e)

14,405

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)

736,956,000

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

0

Payback period

No payback

Estimated lifetime of the initiative

16-20 years

Comment

Fuel-efficient operations

Initiative category and Initiative type

Low-carbon energy consumption

Others, please specify

Substitute for diesel fuel

Estimated annual CO2e savings (metric tons CO2e)
246.2

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)
2,405,000

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
K-S1, GTL usage

Initiative category and Initiative type
Energy efficiency in the production process
Process optimization

Estimated annual CO2e savings (metric tons CO2e)
36,067

Scope(s) or Scope 3 category(ies) where emissions savings occur
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)
22,698,920

Payback period
Less than 1 year

Estimated lifetime of the initiative
21-30 years

Comment

Renewable Energy and Non-Fossil Certificates

C4.3c

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

Method	Comment
Dedicated budget for energy efficiency	Budget for developing technologies to strengthen buildings' energy conservation standards.
Internal incentives/recognition programs	We have an "environmental award" system for initiatives on environmental effects (reducing greenhouse gas emissions, reducing energy usage, increasing efficiency) that constitute activities of remarkable merit or that are otherwise exemplary. Moreover, the personnel evaluation of employees include items on environment-related initiatives, which are reflected in salaries.
Dedicated budget for other emissions reduction activities	Budget for promoting the renewable energy business of the Obayashi Corporation and Group companies. Includes business review budget and technological development budget for solar and biomass power generation, hydrogen use, and so forth.

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

Product or service

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

Other, please specify

JIS

Type of product(s) or service(s)

Cement and concrete

Other, please specify

Low carbon concrete

Description of product(s) or service(s)

By reusing blast furnace slag fine powder and other by-products generated at steel mills, CO2 emissions from materials used have been significantly reduced (by up to 80%).

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

Yes

Methodology used to calculate avoided emissions

The Avoided Emissions Framework (AEF)

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

General Concrete(From product development to shipment)

Functional unit used

t-CO2

Reference product/service or baseline scenario used

General Concrete

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

Cradle-to-gate(From product development to shipment)

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

3,957

Explain your calculation of avoided emissions, including any assumptions

The Obayashi Corporation's low-carbon concrete, Clean-Crete, is a concrete that reduces CO2 emissions by up to 80% compared to ordinary concrete by replacing some of the cement with blast furnace slag fine powder, a by-product of steel production, and fly ash, a by-product of coal-fired power generation. While the production of ordinary concrete emits approximately 260 kg of CO2 per m^3, the production of Clean-Crete can reduce CO2 emissions by up to approximately 50 kg, resulting in a maximum emissions reduction of approximately 80%.

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

0.6

Level of aggregation

Product or service

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

Other, please specify

CASBEE

Type of product(s) or service(s)

Buildings construction and renovation

Other, please specify

Construction of buildings with specifications compliant with CASBEE criteria

Description of product(s) or service(s)

CASBEE is a system that evaluates environmental performance by calculating emissions, etc. during building operation at the time of design. It enables comparison and calculation of reductions because emissions during operation can be calculated for both the designed property and a typical building.

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

Yes

Methodology used to calculate avoided emissions

Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

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

Use stage

Functional unit used

t-CO2

Reference product/service or baseline scenario used

Reference building in CASBEE calculations

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

Use stage

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

14,940

Explain your calculation of avoided emissions, including any assumptions

When environmental performance is evaluated by CASBEE, emissions during building operation can be calculated per unit area. In this process, the emissions of a typical building are calculated as the reference building and the emissions of the designed building as the building in question, so the difference between the two can be calculated as the CO2 emission reduction rate and the amount of reduction.

For example, if the reference building is 100 kg-CO2/m2/year and the building in question is 70 kg-CO2/m2/year, then 1-80/100 = 0.2, a 20% reduction rate. If the total floor area is 10,000 m2, the reference building is 100 kg-CO2/m2/year x 10,000 m2 = 1,000 t-CO2/year,

and the building in question is 80 kg-CO2/m2/year x 10,000 m2 = 800 t-CO2/year, resulting in an annual reduction of 1000 - 800 = 200 t-CO2/year.

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

45

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?

Row1

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?	The details of change in methodology, boundary, and/or reporting year definition.
Row1	Yes, changes to the boundary.	Until CDP 2022 (performance for the fiscal year 2021), we reported individual domestic achievements. However, from CDP 2023 (performance for the fiscal year 2022), we will be reporting consolidated achievements for the Obayashi Group.

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 years' recalculation

Row 1	Yes	Scope 1 Scope 2, Market-based Scope 3	The emission calculation boundary reported individual domestic achievements until CDP 2022 (performance for the fiscal year 2021). However, starting from CDP 2023 (performance for the fiscal year 2022), we report consolidated achievements for the Obayashi Group. It should be noted that the CO2 reduction targets align with SBT certification, and the reference year has been changed to 2019. By comparing the newly set reference year of 2019, the total emissions for Scope 1, 2, and 3 increased by approximately 22%, reaching 4,340.6 thousand t-CO2 for the individual and 5,287.5 thousand t-CO2 for the consolidated group.	No

C5.2

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

Scope 1

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

258,800

Comment

Scope 2(location-based)

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

123,900

Comment

Scope 2(market-based)

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

118,700

Comment

Scope 3 category 1: Purchased goods and services

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

1,741,300

Comment

Scope 3 category 2: Capital goods

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

9,300

Comment

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

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

16,700

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

12,300

Comment

Scope 3 category 5: Waste generated in operations

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

129,900

Comment

Scope 3 category 6: Business travel

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

2,200

Comment

Scope 3 category 7: Employee commuting

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

25,900

Comment

Scope 3 category 8: Upstream leased assets

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

200

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

50,100

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not relevant

As a construction company, the company's end product is construction products. Therefore, the company does not sell intermediate products.

Scope 3 category 11: Use of sold products

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

2,847,100

Comment

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

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

45,200

Comment

Scope 3 category 13: Downstream leased assets

Base year start

1st April, 2019

Base year end

31st March, 2020

Base year emissions (metric tons CO2e)

29,800

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not relevant

As the largest general construction company in Japan, the main business is large-scale

construction work, which differs from management development through franchising, as is carried out by housing manufacturers. Therefore, the question is not relevant because the company does not engage in any business that falls under the category of franchise.

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not relevant
According to the Basic Guidelines for Calculating Greenhouse Gas Emissions through Supply Chains issued by the Ministry of the Environment and the Ministry of Economy, Trade and Industry, the category concerned applies to investment businesses (businesses that invest for profit) and businesses that provide financial services and are mainly for private financial institutions (commercial banks, etc.). This does not apply to our business as a construction company.

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not relevant
CO2 emissions associated with manufacturing of leased assets (upstream), such as construction machinery and temporary materials used at construction sites and fixtures and fittings used at offices, were not calculated because it is difficult to obtain information due to the wide variety of lease sources.

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not relevant
CO2 emissions from dismantling and disposal of leased assets (downstream), namely construction equipment and temporary materials used at construction sites and fixtures and fittings used at offices, were not calculated because it is difficult to obtain information due to the wide range of leased assets.

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Other, please specify
Environmental Accounting Guidelines for the Construction Industry (Japan Construction Industry Association)

C6 Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

283,753

Comment

C6.2

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

Row1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

C6.3

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

Reporting year

Scope 2, location-based

47,759

Scope 2, market-based (if applicable)

46,179

Comment

C6.4

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

No

C6.5

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

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,779,778

Emissions calculation methodology

Spend-based method

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

100

Please explain

Calculated on a consolidated basis for the Obayashi Corporation. We always keep track of the results of purchases and procurement from material manufacturers in construction through the in-house system. This resulted in the calculation of the amount of major construction materials (steel frame, rebar, cement, ready-mixed concrete, and water) to be used in FY2022. The CO2 emissions intensity during material production takes into account the life cycle assessment and uses the LCI database IDEAv2.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

19,562

Emissions calculation methodology

Spend-based method

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

100

Please explain

Calculated on a consolidated basis for the Corporation.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

46,068

Emissions calculation methodology

Average data method

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

100

Please explain

Calculated on a consolidated basis for the Obayashi Corporation. Calculated based on our total energy use from our ISO14001: Environmental Management System (EMS) as well as "average emission intensity of all power sources based on content analysis of energy greenhouse gas composition."

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

11,740

Emissions calculation methodology

Spend-based method

Fuel-based method

Distance-based method

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

100

Please explain

Calculated on a consolidated basis for the Obayashi Corporation. The corporation constantly monitors records of purchases and procurement from material makers during construction, doing so via our internal management systems. The Company calculated the weight of each major material based on the construction and procurement results for FY2022. Referencing the survey results of the former Environmental Load Expert Committee of the BCS (present-day Japan Federation of Construction Contractors), we estimate the average transportation distance for each material and use emission intensity from the fuel use intensity of the ton-kilometer method.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

194,052

Emissions calculation methodology

Waste-type-specific method

Other, please specify

Waste emissions from new construction x CO2 emissions intensity of treatment and disposal

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

100

Please explain

Calculated on a consolidated basis for the Obayashi Corporation.
According to the Basic Guidelines on Calculating Greenhouse Gas Emissions through Supply Chains of the Ministry of the Environment and the Ministry of Economy, Trade and Industry, "CO2 emissions from construction waste transportation can optionally be included in Category 5 (waste from business)." We count it as emissions from waste transportation under a separate item for emission sources called [Downstream transportation and distribution].

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

3,053

Emissions calculation methodology

Other, please specify

The Company calculated the emissions intensity per employee based on the Guidelines for Calculating Greenhouse Gas Emissions through Supply Chains issued by the Ministry of the Environment and the Ministry of Economy, Trade and Industry of Japan [Number of employees x CO2 emission intensity per employee].

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

100

Please explain

Calculated on a consolidated basis for the Obayashi Corporation.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

56,938

Emissions calculation methodology

Other, please specify

Based on the Basic Guidelines for Calculating Greenhouse Gas Emissions through Supply Chains issued by the Ministry of the Environment and the Ministry of Economy, Trade and Industry, the Company calculated the emissions intensity for construction worker commuting based on [distance travelled/fuel consumption x CO2 emissions intensity from diesel oil] and for employee commuting based on [transportation expense paid by each transportation category x emissions intensity per transportation expense paid by each transportation category].

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

100

Please explain

Calculated on a consolidated basis for the Obayashi Corporation.
Based on the Basic Guidelines on Calculating Greenhouse Gas Emissions through Supply Chains of the Ministry of the Environment and the Ministry of Economy, Trade and Industry,
1.we calculate CO2 emissions from construction worker commutes by multiplying the CO2 emission coefficient by the amount of diesel used from average commute distance, number of persons traveling together, and fuel, converted using the total number of workers from labor safety management data.

2.CO2 emissions from employee commutes is calculated multiplying allowance for commuting by train, bus, ferry, taxi, or private car by emission intensity per travel allowance according to traffic zone.

Upstream leased assets

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

408

Emissions calculation methodology

Other, please specify

Company-owned car and car lease x average transportation distance x CO2 emission intensity
This is calculated using the "ton-kilometer method" in conformance with the Basic Guidelines on Calculating Greenhouse Gas Emissions through Supply Chains of the Ministry of the Environment and the Ministry of Economy, Trade and Industry.

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

100

Please explain

Calculated on a consolidated basis for the Obayashi Corporation.
We include CO2 emissions from the transportation of construction machinery and provisional materials at construction sites that correspond to lease assets (upstream) in Scope 1 of the annual environmental report.
At present, we are including this by calculating it from gasoline use surveyed and tallied from supply chains through our Tokyo head office and branches (13 locations) in ISO14001 and EMS (Environmental Management System).

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

79,973

Emissions calculation methodology

Other, please specify

Waste emissions from new construction and dismantling x average transportation distance x CO2 emission intensity

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

100

Please explain

Calculated on a consolidated basis for the Obayashi Corporation.
See entry for mission source [Waste generated in operations].

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

As a construction company, we consider buildings to be finished products. As such, we do not sell intermediate products, so this is not relevant.

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,187,833

Emissions calculation methodology

Other, please specify

The amount is recorded for the year of completion of construction in FY2022. The calculation is based on the CASBEE emissions per area during operation of the in-house-designed and -constructed property x total floor area x 35 years in service.

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

100

Please explain

Calculated on a consolidated basis for the Obayashi Corporation.
The amount is recorded for the year of completion of construction in FY2022. The calculation is based on the CASBEE emissions per area during operation of the in-house designed and constructed property x total floor area x 35 years in service.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

50,031

Emissions calculation methodology

Waste-type-specific method
Other, please specify

Waste emissions from dismantling x CO2 emission intensity from processing and disposal

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

100

Please explain

Calculated on a consolidated basis for the Obayashi Corporation.
CO2 emissions accompanying construction and building dismantling are calculated according to the case, including structure and usage. Moreover, for buildings designed by ourselves, we include CO2 emissions during dismantling when calculating LCCO2 with CASBEE (Comprehensive Assessment System for Built Environment Efficiency). However, the buildings we construct will not necessarily be dismantled by ourselves in the future. Moreover, as buildings' years of durability and destruction period differ greatly between decades because of methods of operations, maintenance, and management, so it is impossible to predict how and when our structures will be dismantled. Thus, we are unable to predict annual CO2 emissions for this. Therefore, for disposal of products sold, the Company decided to use the CO2 emissions from construction waste from demolition work (including demolition of existing structures for new construction) for which the company received orders in FY2022, instead of demolition treatment and disposal for projects constructed, as the CO2 emissions from the treatment and disposal of such waste. Moreover, we count CO2 emissions from transportation of construction waste in connection with dismantling as emissions from waste transportation under a separate item for emission sources called [Downstream transportation and distribution].

Downstream leased assets

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

24,677

Emissions calculation methodology

Lessor-specific method

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

100

Please explain

Calculated on a consolidated basis for the Obayashi Corporation.
Calculated based on the leased building area x Building Energy Consumption Survey Report [Report 44].

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

As one of Japan's biggest comprehensive construction companies, we primarily engage in large-scale construction jobs, which differ from businesses by franchises such as house builders. So, since we do not conduct business that corresponds to franchises, this question is not relevant.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

According to the Basic Guidelines on Calculating Greenhouse Gas Emissions through Supply Chains of the Ministry of the Environment and the Ministry of Economy, Trade and Industry, this category applies to investors (businesses that invest for profit) as well as businesses that offer financial services, so it is mainly for private financial institutions (commercial banks, etc.). This does not apply to our businesses as we are a construction company.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

We do not calculate CO2 emissions associated with lease assets (upstream) in the form of construction machinery and provisional materials used at construction sites as well as the "manufacturing" of appliances and equipment used in offices. This is because the information is difficult to obtain as we deal with many different leasers.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

We do not calculate CO2 emissions associated with lease assets (downstream) in the form of construction machinery and provisional materials used at construction sites as well as the "dismantling and disposal" of appliances and equipment used in offices. This is because the information is difficult to obtain as we deal with many different leasers

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C-CN6.6/C-RE6.6

(C-CN6.6/C-RE6.6) Does your organization assess the life cycle emissions of new construction or major renovation projects?

	Assessment of life cycle emissions	Comment
Row1	Yes, quantitative assessment	When undertaking new construction or large-scale renovation projects, the construction industry categorizes projects based on the contracting method into those that involve both design and construction (design-build) and those that only involve construction. Projects with design and construction contracts offer a more proactive consideration and implementation of GHG emissions throughout the lifecycle. Within the Obayashi Group, for nearly all new construction projects with design and construction contracts, environmental performance is evaluated using 'CASBEE. In 'CASBEE,' environmental efficiency and lifecycle CO2 are evaluated criteria. For lifecycle CO2 emissions, a warming impact chart compares the reference value with the evaluated LCCO2 of the target building as follows: ①Reference value (LCCO2 of a standard building assumed to have energy-saving performance equivalent to the judgment criteria of the Energy Conservation Law, corresponding to the judgment criteria of building owners under energy-saving laws). ②Evaluated LCCO2 of the target building (assessment includes efforts such as the use of eco-materials, building longevity, and energy efficiency in building practices). ③Results incorporating on-site methods other than those in (2) (e.g., on-site solar power generation). ④Results incorporating both the evaluated LCCO2 of the target building in (2) and off-site methods (e.g., introduction of green power certificates, implementation of carbon credits). Regarding the evaluated LCCO2 of the target building in (2), the annual emissions per floor area are calculated by combining all stages—construction, repair/renovation/demolition, and operation—to derive the "lifecycle" emissions. Therefore, a quantitative evaluation is conducted for each property in the respective fiscal year based on this numerical value.

C-CN6.6a/C-RE6.6a

(C-CN6.6a/C-RE6.6a) Provide details of how your organization assesses the life cycle emissions of new construction or major renovation projects.

Projects assessed	Earliest project phase that most commonly includes an assessment	Life cycle stage(s) most commonly covered	Methodologies/standards/tools applied	Comment
All new construction and major renovation projects	Design phase	Cradle-to-gate	GHG Protocol - Product Life Cycle Accounting and Reporting Standard	CASBEE (Comprehensive Assessment System for Building Environmental Efficiency) is a system that comprehensively evaluates the quality of a building, including environmental considerations such as the use of energy-efficient and environmentally friendly materials, as well as factors like indoor comfort and landscape awareness. Established as a collaborative project supported by the Ministry of Land, Infrastructure, Transport, and Tourism's Housing Bureau in April 2001, CASBEE set up the Committee for Comprehensive Environmental Assessment of Buildings. Subsequently, the former General Foundation for Building Environment and Energy Conservation, currently IBECS (Institute for Building

				Environment and Energy Conservation), and JSBC (Japan Sustainable Building Consortium) have been responsible for its ongoing development and maintenance. Within the Obayashi Group, considering that buildings are used for several decades, the annual emissions per floor area during the "operation" phase calculated by CASBEE are evaluated in comparison to the same emissions for the reference building. The goal is to set and assess targets based on this ratio annually, aiming to provide buildings that are consistently more advanced in the market than the average building indicated by CASBEE. CASBEE evaluates environmental efficiency and lifecycle CO2, comparing the reference value and the evaluated LCCO2 of the target building using a warming impact chart for lifecycle CO2 emissions. This comparison includes: ①Reference value (LCCO2 of a standard building assuming energy-saving performance equivalent to the judgment criteria of the Energy Conservation Law), ②Evaluated LCCO2 of the target building (considering efforts such as the use of eco-materials, building longevity, and energy efficiency in building practices), ③Results using on-site methods other than those in (2) (e.g., on-site solar power), and ④Results using both on-site and off-site methods (e.g., introduction of green power certificates, implementation of carbon credits).

				CASBEE uses the 2005 Industrial Input-Output Analysis by the Architectural Institute of Japan as the source for embodied CO2 calculation methods and CO2 emission unit data in the LCCO2 calculation conditions sheet. The Environmental Impact Unit Data Book (3EID) based on industrial input-output analysis is included as one of the Third-Party Databases for greenhouse gas emissions, complying with the GHG Protocol's calculation standards for scope 3 emissions.

C-CN6.6b/C-RE6.6b

(C-CN6.6b/C-RE6.6b) Can you provide embodied carbon emissions data for any of your organization's new construction or major renovation projects completed in the last three years?

	Ability to disclose embodied carbon emissions	Comment
Row1	Yes	The Obayashi Group assesses the buildings it designs and constructs in a given year using CASBEE, tallies differences in CO2 emissions during operations between the "reference buildings" that CASBEE indicates as average every year and the "relevant buildings" based on the design specifications, and publicizes our annual reductions. The actual values are: FY2020 = 33,300 t-CO2, FY2021 = 22,700 t-CO2, FY2022 = 14,900 t-CO2

C-CN6.6c/C-RE6.6c

(C-CN6.6c/C-RE6.6c) Provide details of the embodied carbon emissions of new construction or major renovation projects completed in the last three years.

Year of completion

2022

Property sector

Other, please specify

New design and construction projects

Type of project

New construction

Project name/ID (optional)

Newly designed and constructed properties in FY2022

Life cycle stage(s) covered

Cradle-to-grave

Normalization factor (denominator)

Other, please specify

Based on calculation method according to the Building Standards Law

Denominator unit

square meter

Embodied carbon (kg/CO2e per the denominator unit)

14,940,000

(%) of new construction/major renovation projects in the last three years covered by this metric (by floor area)

21.03

Methodologies/standards/tools applied

GHG Protocol - Product Life Cycle Accounting and Reporting Standard

Comment

For the fiscal year 2022, the annual emission total of the "reference building" and the "subject building" is calculated from the operational emissions according to CASBEE for newly constructed design-build projects. The reduction amount is then calculated as the difference. The coverage ratio is calculated as the ratio of the constructed floor area over the past three years. In the CASBEE LCCO2 calculation conditions sheet, the embodied CO2 calculation method and the source of CO2 emission units use the results of the 2005 Industrial Input-Output Analysis by the Architectural Institute of Japan. The Environmental Impact Unit Data Book (3EID) based on industrial input-output analysis is listed as one of the Third-Party Databases for greenhouse gas emissions, complying with the GHG Protocol's calculation standards for scope 3 emissions.

Year of completion

2021

Property sector

Other, please specify

New design and construction projects

Type of project

New construction

Project name/ID (optional)

New design and construction projects in FY2021

Life cycle stage(s) covered

Cradle-to-grave

Normalization factor (denominator)

Other, please specify

Based on calculation method according to the Building Standards Law

Denominator unit

square meter

Embodied carbon (kg/CO2e per the denominator unit)

22,712,000

(%) of new construction/major renovation projects in the last three years covered by this metric (by floor area)

31.97

Methodologies/standards/tools applied

GHG Protocol - Product Life Cycle Accounting and Reporting Standard

Comment

For the fiscal year 2021, the annual emission total of the "reference building" and the "subject building" is calculated from the operational emissions according to CASBEE for newly constructed design-build projects. The reduction amount is then calculated as the difference. The coverage ratio is calculated as the ratio of the constructed floor area over the past three years. In the CASBEE LCCO2 calculation conditions sheet, the embodied CO2 calculation method and the source of CO2 emission units use the results of the 2005 Industrial Input-Output Analysis by the Architectural Institute of Japan. The Environmental Impact Unit Data Book (3EID) based on industrial input-output analysis is listed as one of the Third-Party Databases for greenhouse gas emissions, complying with the GHG Protocol's calculation standards for scope 3 emissions.

Year of completion

2020

Property sector

Other, please specify

New design and construction projects

Type of project

New construction

Project name/ID (optional)

New design and construction projects in FY2020

Life cycle stage(s) covered

Cradle-to-grave

Normalization factor (denominator)

Other, please specify

New design and construction projects

Denominator unit

square meter

Embodied carbon (kg/CO2e per the denominator unit)

33,399,000

(%) of new construction/major renovation projects in the last three years covered by this metric (by floor area)

47

Methodologies/standards/tools applied

GHG Protocol - Product Life Cycle Accounting and Reporting Standard

Comment

For the fiscal year 2020, the annual emission total of the "reference building" and the "subject building" is calculated from the operational emissions according to CASBEE for newly constructed design-build projects. The reduction amount is then calculated as the difference. The coverage ratio is calculated as the ratio of the constructed floor area over the past three years. In the CASBEE LCCO2 calculation conditions sheet, the embodied CO2 calculation method and the source of CO2 emission units use the results of the 2005 Industrial Input-Output Analysis by the Architectural Institute of Japan. The Environmental Impact Unit Data Book (3EID) based on industrial input-output analysis is listed as one of the Third-Party Databases for greenhouse gas emissions, complying with the GHG Protocol's calculation standards for scope 3 emissions.

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

16.63

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

329,932

Metric denominator

unit total revenue

Metric denominator: Unit total

19,838.9

Scope 2 figure used

Market-based

% change from previous year

11.89

Direction of change

Decreased

Reason for change

Changes in renewable energy consumption
Other emission reduction activities
Changes in boundaries.

Explanation

The Obayashi Group total income (sales) intensity. Sales increased by 3.2% compared to the previous fiscal year. Engaging in CO2 emission reduction activities such as the introduction of light oil substitute fuels, promotion of ICT labor-saving construction to reduce fuel consumption, and transition to renewable energy, the CO2 emissions for the fiscal year 2022 were reduced by 9.1%. The sales intensity for the fiscal year 2022 decreased by 11.89% compared to the fiscal year 2021.

Intensity figure

11.33

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

144,845

Metric denominator

Other, please specify
Construction amount

Metric denominator: Unit total

12,779

Scope 2 figure used

Market-based

% change from previous year

22.11

Direction of change

Decreased

Reason for change

Changes in renewable energy consumption
Other emission reduction activities

Explanation

Construction amount intensity. The denominator is the construction amount for the construction work, which is a major business of the Obayashi Corporation in the fiscal year 2022. The construction amount decreased by 4.3% compared to the previous fiscal year. Engaging in CO2 emission reduction activities such as the introduction of light oil substitute fuels, promotion of ICT labor-saving construction to reduce fuel consumption, and transition to renewable energy, the CO2 emissions for the fiscal year 2022 were reduced by 25.5%. The construction amount intensity for the fiscal year 2022 decreased by 22.1% compared to the fiscal year 2021.

C7 Emissions breakdown

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	226,857
North America	32,090
Please provide more specific details. Asia	24,465
Western Europe	341

C7.3

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

By business division
By activity

C7.3a

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

Business division	Scope 1 emissions (metric tons CO2e)

Civil engineering construction site	120,499
Building construction site	93,373
Other (Factory)	69,154
Other (Office)	727

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Construction	213,872
Factory	69,154
Office	727

C7.5

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

Country/Area/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Japan	27,955	27,030
North America	11,169	10,800
Please provide more specific details. Asia	8,516	8,234
Western Europe	119	115

C7.6

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

By business division
By activity

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)
Civil engineering construction site	20,698	20,013
Building construction site	16,977	16,415
Other (Factory)	5,073	4,906

Other (Office)	5,011	4,845

C7.6c

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

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Construction	37,675	36,428
Factory	5,073	4,906
Office	5,011	4,845

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

2022 Obayashi Road Corporation

Main Business Activities

Non-residential building construction

Please select the unique ID that your company can provide for this subsidiary.

There is no unique ID

ISIN Code – Bonds

ISIN Code - Stocks

CUSIP Number

Ticker Symbol

SEDOL Code

LEI Number

Other Unique IDs

Please select the unique ID that your company can provide for this subsidiary.

Scope 1 Emissions (CO2 equivalent tons)

71,909

Scope 2 Emissions, Location-Based (CO2 equivalent tons)

14,219

Scope 2 Emissions, Market-Based (CO2 equivalent tons)

13,749

Comments

C7.9

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

Increased

C7.9a

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

Reason	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	12,022	Decreased	6.19	In the fiscal year 2022, the total CO2 emissions (Scope 2) decreased by 12,022 t-CO2 due to the switch to renewable energy for electricity and the procurement of renewable energy-derived electricity using non-fossil certificates. The percentage of the reduction in the total CO2 emissions (Scope 1 + 2) for the fiscal year 2021 in terms of the change amount (reduction amount) is 12,022 t-CO2 / 194,363 t-CO2 = 6.19%. (Reported value for the fiscal year 2021 (actual performance for the fiscal year 2021): 194,363 t-CO2 (*)) *The actual performance for the fiscal year 2021 has been revised from the previous CDP response value based on third-party verification..
Other emissions	2,290	Decreased	1.18	In the fiscal year 2022, the total CO2 emissions (Scope 2) decreased by an estimated 2,290 t-CO2 due to the

reduction activities				promotion of LED conversion for temporary lighting at the Obayashi Corporation Construction sites. The percentage of the reduction in the total CO2 emissions (Scope 1 + 2) for the fiscal year 2021 in terms of the change amount (reduction amount) is 2,290 t-CO2 / 194,363 t-CO2 = 1.18%. (Reported value for the fiscal year 2021 (actual performance for the fiscal year 2021): 194,363 t-CO2 (*)) The actual performance for the fiscal year 2021 has been revised from the previous CDP response value based on third-party verification.
Divestment	0	No change	0	Not Applicable
Acquisitions	0	No change	0	Not Applicable
Mergers	0	No change	0	Not Applicable
Change in output	185,087	Increased	95.23	Emissions in FY2021 (Scope 1) increased by 32,760 t-CO2 compared to FY2020, mainly due to the greater use of heavy excavation equipment and pile-driving machines at construction sites than in FY2020, despite efforts to reduce CO2 emissions through fuel-efficient operations at construction sites, etc. The ratio of the amount of change (increase) to the total amount of CO2 emissions (Scope 1 + 2) in FY2020 (reported value for FY2020 (actual value for FY2020): 170,421t-CO2 (*)) was 32,760t-CO2/170,421t-CO2 = 19.22%. * The FY2020 actual values have been changed from the previous CDP response values due to third-party verification.
Change in methodology	0	No change	0	Not Applicable
Change in boundary	0	No change	0	In the fiscal year 2022, the total CO2 emissions (Scope 1 + Scope 2) increased by 185,087 t-CO2 due to a change in the reporting boundary from domestic standalone to the entire group. The percentage of the change amount

				(increase amount) in the total CO2 emissions (Scope 1 + 2) for the fiscal year 2021 is 185,087 t-CO2 / 194,363 t-CO2 = 95.23%. (Reported value for the fiscal year 2021 (actual performance for the fiscal year 2021): 194,363 t-CO2 (*)) *The actual performance for the fiscal year 2021 has been revised from the previous CDP response value based on third-party verification.
Change in physical operating conditions	0	No change	0	Not Applicable
Unidentified	0	No change	0	Not Applicable
Other	0	No change	0	Not Applicable

C7.9b

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

Market-based

C8 Energy

C8.1

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

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

C8.2

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

Activity	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes

Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

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

Activity	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable + non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	514,790	514,790
Consumption of purchased or acquired electricity		174,722	122,837	297,559
Consumption of purchased or acquired steam		0	4	4
Consumption of self-generated non-fuel renewable energy		2,184		2,184
Total energy consumption		176,906	637,631	814,537

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

Fuel application	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	No

Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

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

Sustainable biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

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 electricity

0

MWh fuel consumed for self-generation of heat

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 electricity

0

MWh fuel consumed for self-generation of heat

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 electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Oil

Heating value

HHV

Total fuel MWh consumed by the organization

513,653

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Gas

Heating value

HHV

Total fuel MWh consumed by the organization

1,137

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

73

Comment

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

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Total fuel

Heating value

HHV

Total fuel MWh consumed by the organization

514,790

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

73

Comment

C8.2d

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

Energy Carrier	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	2,412	2,387	2,209	2,184
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2e

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

Countries/Regions with Low Carbon Energy Consumption

Japan

Sourcing method

Procurement of Electricity and Separated Energy Attribute Certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

Solar power, wind power, biomass, etc.

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

142,335

Tracking instrument used

NFC – Renewable

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

Japan

Can you report the year of commissioning or repowering of the power generation facility?

Yes

Year of commencement of operation for the power generation facility (e.g., date of initial commercial operation or repowering).

2022

Comment

Countries/Regions with Low Carbon Energy Consumption

Japan

Sourcing method

The default supply electricity from a system backed by energy attribute certification (e.g., standard products provided by energy suppliers).

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

Solar power, wind power, biomass, etc.

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

32,387

Tracking instrument used

NFC – Renewable

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

Japan

Can you report the year of commissioning or repowering of the power generation facility?

Yes

Year of commencement of operation for the power generation facility (e.g., date of initial commercial operation or repowering).

2022

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)

297,559

Consumption of self-generated electricity(MWh)

2,184

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

4

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

0

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

299,747

C9 Additional metrics

C9.1

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

Description

Waste

Metric value

17.4

Metric numerator

Construction waste emissions from new construction (excl. sludge) [t]

Metric denominator (intensity metric only)

Civil engineering construction volume for that year [100,000,000 yen]

% change from previous year

11.5

Direction of change

Increased

Please explain

The total amount of construction waste excluding sludge in new construction projects is aggregated from manifests, and the construction volume per construction unit is calculated based on the annual construction volume of new construction projects. The evaluation of emission reduction efficiency is conducted by observing changes over the years based on the construction volume ratio. The increase in the fiscal year 2022 compared to the fiscal year 2021 is attributed to the growing use of the reverse method in large-scale projects.

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
Row1	Yes	The Obayashi Corporation is a construction business and is investing in the development of technologies for environmental performance and construction that conserve energy as low-carbon products as well as technologies for building management as services. In FY2022, "environment-related development costs" corresponded to 5,888,000,000 yen of environmental preservation costs.

C-CN9.6a/C-RE9.6a

(C-CN9.6a/C-RE9.6a) Provide details of your organization's investments in low-carbon R&D for real estate and construction activities over the last three years.

Technology area

Unable to disaggregate by technology area

Stage of development in the reporting year

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

45

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

5,788,000,000

The average percentage of planned R&D total investment over the next 5 years.

50

Please explain how your company's R&D investment in this technological field aligns with climate change initiatives and climate transition plans.

In building construction, it is necessary to consider the reduction of direct and indirect greenhouse gas emissions, including material production, construction work, and post-completion operation. From this perspective, research and development are underway to reduce emissions during material manufacturing through innovative production methods and product development, develop energy-efficient construction methods, create energy-efficient construction machinery, and enhance the design of low-emission buildings through improvements in envelope performance and facility efficiency. Each year, the content of research and development is reviewed and determined by the Technical Department based on the above, and initiatives are promoted accordingly.

C-CN9.10/C-RE9.10

(C-CN9.10/C-RE9.10) Did your organization complete new construction or major renovations projects designed as net zero carbon in the last three years?

No, but we plan to in the future

C-CN9.11/C-RE9.11

(C-CN9.11/C-RE9.11) Explain your organization’s plan to manage, develop or construct net zero carbon buildings, or explain why you do not plan to do so.

The Obayashi Corporation's scope of work includes construction and some design. For management, development, and construction of net zero carbon buildings, it is necessary to achieve zero emissions not only during construction, but also during operation and demolition, and this cannot be achieved solely within the scope of the Company's business. For these reasons, the construction industry cannot be directly involved; on the other hand, however, it is indirectly involved in supplying buildings that reduce emissions during operation, but the Company sees this as the responsibility of the construction industry. However, with the current situation, in which the promotion of ZEB also aims for a reduction of 50% or more in building performance, it must be said that it is difficult in terms of both technology and cost to achieve zero emissions during operation by building performance alone. For emissions that cannot be compensated for by building performance, the project owner will procure CO2-free energy during operation. Such a scheme – that is, one for project involvement over the life cycle – is under consideration, but there are no concrete plans at this time.

C10 Verification

C10.1

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

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

C10.1a

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

Verification or assurance cycle in place

Annual process

Status in the current reporting year

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

Type of verification or assurance

Limited assurance

Attach the statement

【The Obayashi Corporation】Verification Report of Environmental Information.pdf

Page/section reference

1/1

Relevant standard

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

Proportion of reported emissions verified (%)

100

C10.1b

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

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

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

Type of verification or assurance

Limited assurance

Attach the statement

【The Obayashi Corporation】Verification Report of Environmental Information.pdf

Page/section reference

1/1

Relevant standard

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

Proportion of reported emissions verified (%)

100

C10.1c

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

Scope 3 category

Scope 3: Purchased goods and services
Scope 3: Capital goods
Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
Scope 3: Upstream transportation and distribution
Scope 3: Waste generated in operations
Scope 3: Business travel
Scope 3: Employee commuting
Scope 3: Upstream leased assets
Scope 3: Investment
Scope 3: Downstream transportation and distribution
Scope 3: Processing of sold products
Scope 3: Use of sold products
Scope 3: End-of-life treatment of sold products
Scope 3: Downstream leased assets
Scope 3: Franchise

Verification or assurance cycle in place

Annual process

Status in the current reporting year

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

Type of verification or assurance

Limited assurance

Attach the statement

【The Obayashi Corporation】Verification Report of Environmental Information.pdf

Page/section reference

1/1

Relevant standard

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

Proportion of reported emissions verified (%)

100

C10.2

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

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

C11 Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. Emission trading, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

Tokyo CaT - ETS

C11.1b

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

Tokyo CaT - ETS

% of Scope 1 emissions covered by the ETS

0.31

% of Scope 2 emissions covered by the ETS

9.04

Period start date

1st April, 2022

Period end date

31st March, 2025

Allowances allocated

0

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e

461.7

Verified Scope 2 emissions in metric tons CO2e

4,311

Details of ownership

Other, please specify

Facilities either partly or fully owned and managed by us

Comment

We report the CO2 emissions of our offices and facilities in Tokyo Metropolis (offices and facilities with oil equivalent energy usage of at least 30 kL and less than 1,500 kL in the previous fiscal year) in accordance with the Tokyo Metropolitan Government's Program for Reporting on Measures against Global Warming. This system is part of the urban cap & trade system for office buildings, etc. that is led by Tokyo Metropolis. Since the deadline for submitting the FY2022 results has yet to come, the reported values are from the FY2021 results.

C11.1d

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

The Obayashi Corporation owns offices as bases for our business activities. As with the activities at our construction sites, office energy use and concomitant greenhouse gas emissions have to be considered in terms of climate change measures for our business activities and it is important that we keep emissions down. Especially in Tokyo where we have greatest number of employees, we report the CO2 emissions of our offices and facilities in Tokyo Metropolis (offices and facilities with oil equivalent energy usage of at least 30 kL and less than 1,500 kL in the previous fiscal year) in accordance with the Tokyo Metropolitan Government's Program for Reporting on Measures against Global Warming. The following are measures we implement and promote to cut emissions.

1. We are utilizing the ISO14001 organizational system that we are operating inside the Obayashi Corporation to promote energy conservation, appointing an energy conservation manager at each store and creating a system for promoting activities.

2. We measure the energy use figures of each department annually and announce them to all employees through the abovementioned system, thereby seeking to raise everyone's energy conservation awareness.

By making reports according to this system, we encourage higher awareness about emissions from office activities and thus contribute to keeping CO2 emissions down. Offices

are in constant use, so we will continue the virtuous circle of raising awareness and promoting reduced emissions.
Note that the report for the fiscal year 2022 is currently under review (to be submitted by the end of August), so the data presented pertains to the achievements of the fiscal year 2021. The total CO2 emissions amount to 4,772.7 t-CO2, with 461.7 t-CO2 in Scope 1 and 4,311 t-CO2 in Scope 2. This represents a decrease from the previous fiscal year's 5,873.7 t-CO2.

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?

No, and we don’t anticipate doing so in the next two years.

C12 Engagement

C12.1

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

Yes, our suppliers
Yes, our customers/clients
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

- Run an engagement campaign to educate suppliers about climate change
- Climate change performance is featured in supplier awards scheme

% of suppliers by number

100

% total procurement spend (direct and indirect)

100

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

64.2

Rationale for the coverage of your engagement

The Obayashi Corporation believes that addressing activities related to environmental conservation is essential for fulfilling the corporate social responsibility (CSR), and this requires efforts throughout the entire supply chain. The company is committed to conducting fair transactions with suppliers, aiming to strengthen trusted partnerships for mutual growth and development. The Obayashi Corporation strives to enhance understanding of its fundamental principles and CSR philosophy among both domestic and international business partners. The goal is to collaboratively address themes such as human rights, safety and health, environment, quality, and social contribution.

In June 2011, the Obayashi Corporation established CSR Procurement Guidelines to contribute to the realization of a sustainable society as outlined in its fundamental principles. In March and November 2020, the company revised the "Obayashi Group CSR Procurement Policy" by incorporating more specific items in response to various demands from society. Within this policy, the basic principles for promoting CSR procurement by the Obayashi Group personnel are outlined as the "Basic Policy for CSR Procurement Activities." The policy also establishes the "CSR Procurement Guidelines," which specify the practices to be requested from suppliers based on the aforementioned principles.
In accordance with these guidelines, the Obayashi Group aims to build strong partnerships with suppliers based on mutual trust. The company not only seeks understanding and dissemination of the "CSR Procurement Guidelines" among its own group of suppliers but also extends these principles to the suppliers within their supply chain. This approach promotes CSR initiatives across all supply chains related to the Obayashi Group's business activities. Key initiatives are incorporated into contractual provisions with suppliers, and confirmation is made at the time of contract.
The "Obayashi Group CSR Procurement Policy" outlines nine items, including consideration for the environment. Under the category of "Consideration for the Environment," the policy explicitly states, "Promote business activities that consider environmental conservation and reduce environmental impact." The content includes addressing climate-related issues, such as CO2 reduction through energy and resource conservation.
Furthermore, for construction equipment and similar items, the Obayashi Corporation has established its own "Office Supplies and Construction Equipment Green Procurement Guidelines." These guidelines, as part of the procurement policy, consider contributing to environmental conservation activities, including promoting energy and resource conservation and reducing carbon dioxide emissions. The company takes into account the suppliers' commitment to environmental initiatives, evaluating their stance based on the "Supplier's Environmental Management Standards" and prioritizing the procurement of items that are at least equivalent or relatively advantageous.
Both the "Obayashi Group CSR Procurement Policy" and the "Office Supplies and Construction Equipment Green Procurement Guidelines" apply to all suppliers, and the company publicly discloses their compliance both internally and externally. Therefore, this applies to all suppliers with whom transactions were conducted in the fiscal year 2022.

It should be noted that subcontractors participating in construction projects, a key business for the Obayashi Corporation, are crucial suppliers, and collaboration with these subcontractors is essential. In construction project sites, educational initiatives, such as fuel-efficient driving training for subcontractor workers, are implemented. Through collaborative efforts between the Obayashi Corporation and subcontractors, initiatives are undertaken to reduce carbon dioxide (CO2) emissions during the construction phase. This includes the use of low-carbon construction machinery, fuel-efficient operation of vehicles and construction equipment, idle stop practices, and the use of alternative fuels such as diesel substitutes. It's important to highlight that cooperation from subcontractors is indispensable for conducting surveys on fuel consumption at construction sites, which serve as the basis for calculating CO2 emissions during the construction phase—accounting for over 99% of the Obayashi's Corporation Scope 1 CO2 emissions.

Impact of engagement, including measures of success

In the Obayashi Group, the action plan "Promotion of CSR Procurement," established based on the important ESG issues (Materiality), is identified as a mid-term management plan 2022 business foundation measure. This plan aims to enhance the understanding of CSR procurement across the entire group's supply chain. Key Performance Indicators (KPIs) for this initiative include the "Proportion of procurement from companies responding to CSR procurement surveys" and the "Number of engagement activities with cooperative companies."

The Obayashi Corporation conducts an annual survey to promote awareness and compliance with the "Obayashi Group CSR Procurement Guidelines" throughout the entire supply chain. In the fiscal year 2022, the survey was conducted among approximately 1,500 suppliers, including members of the " Obayashi Corporation RIN-YU-KAI," comprising about 1,200 affiliated companies nationwide and other firms with continuous transaction records. The actual performance for the KPI "Proportion of procurement from companies responding to CSR procurement surveys" (target: 70%) was 79%.

As a result, the promotion of CSR procurement, including measures to address climate-related issues (such as CO2 reduction through energy and resource conservation), is generally well-embedded across the entire supplier base.

Additionally, every year, as part of cooperative company engagement, Corporation conducts exchanges of opinions with companies affiliated with the Obayashi Corporation RIN-YU-KAI on a wide range of topics, including quality, safety, environment, workstyle reforms, productivity improvement, and securing human resources. The number of engagements conducted in the fiscal year 2022 exceeded the target of 100 companies, reaching 145 in actual performance. Opinions and best practices gathered through these exchanges are disseminated throughout the entire organization and utilized in subsequent initiatives.

Moreover, on a biannual basis, evaluations are conducted, using seven criteria such as "quality," "safety," and "environment," to assess cooperative companies on a five-point scale. Evaluation results are individually communicated to each company, followed by improvement guidance through discussions and other means. Outstanding cooperative companies are recognized through commendations. Through engagement activities, the

Obayashi Corporation aims to raise awareness of CSR procurement among cooperative companies and build strong partnerships.
When all suppliers (cooperative companies), including member companies of the Obayashi Corporation RIN-YU-KAI, participate in the Obayashi Corporation's construction projects, it is a prerequisite under the construction contract that they adhere to the Obayashi Corporation's construction management. This encompasses environmental conservation activities, such as the reduction of CO2 emissions, through the Obayashi Corporation's environmental management system. Therefore, it can be said that all suppliers (cooperative companies) are collaborating.
As part of the environmental management system for the fiscal year 2022, Corporation has established environmental goals, including targets for the "CO2 emission reduction rate (compared to fiscal year 2019)" (Scope 1 + 2), and has communicated and educated suppliers (cooperative companies) on environmental goals and conservation activities at construction sites. These activities include fuel-efficient driving, idle stop practices, the introduction of diesel substitutes, and energy-efficient construction practices.
Furthermore, the company monitors and evaluates the progress of activities at each construction site every six months. This evaluation contributes to assessing the effectiveness and success of engagement with suppliers.
As an example, the achievement of one of the environmental goals for the fiscal year 2022 within the environmental management system and a key performance indicator (KPI) based on the important ESG issues (Materiality) is the "CO2 emission reduction rate (compared to fiscal year 2019) (Scope 1 + 2)." This is calculated based on the reported monthly energy consumption, such as diesel fuel, from suppliers (cooperative companies) at the Obayashi Corporation's construction sites.
In the Obayashi Corporation's construction project sites, environmental education is mandatory, not only for our employees but also for workers from cooperative companies. This education is implemented in accordance with the environmental management system.
Furthermore, the implementation of fuel-efficient driving training at construction sites is addressed as a performance indicator within the environmental management system.

A direct indicator of success in collaboration with cooperative companies related to climate-related issues is the KPI based on the important ESG issues (Materiality) and the environmental goal item "CO2 emission reduction rate (compared to fiscal year 2019) (Scope 1 + 2)" for the Civil Engineering and Construction Departments in our environmental management system. In the fiscal year 2022, the achievement was 12.6%, meeting the target of 12.6%. Thus, engagement with cooperative companies is considered successful.
Additionally, the efforts of suppliers (cooperative companies) at the Obayashi Corporation's construction sites, such as fuel-efficient driving, contribute to the reduction of their own Scope 1 and 2 emissions, resulting in savings in fuel purchase costs and other areas. This is viewed as a contribution and incentive. Furthermore, engagement and recognition systems with cooperative companies influence their behavior. For example, there are cases where cooperative companies transition to emission control construction machinery brought to our construction sites. This transition is seen as a result of the incentive and engagement systems with these cooperative companies.

Comment

C12.1b

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

Type of engagement and Details of engagement

Collaboration & innovation

Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

100

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

35.1

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

At the Obayashi Corporation, the Corporate Code of Conduct, based on the Obayashi Corporation fundamental principles, outlines guidelines for maintaining a company trusted by all stakeholders. This includes "environmentally conscious societal development" and "providing high-quality buildings and services." The company actively proposes environmentally friendly technologies to all customers. Therefore, all customers are the focus of engagement.

Employing a consistent quality management approach based on the Quality Management System, the Obayashi Corporation provides high-quality buildings and services that satisfy customers. The company is committed to advanced technology development and solution provision to meet diverse customer needs. Additionally, it engages in customer support from BCP (Business Continuity Plan) formulation during disasters to restoration works.
Notably, recognizing the significant CO2 emissions during building operation, the Obayashi Corporation actively proposes technologies to reduce CO2 emissions during the operation of its design and construction projects. Leveraging its technical expertise, the company proposes features such as ZEB and specifications that achieve A-rank or higher evaluations in CASBEE (Comprehensive Assessment System for Built Environment Efficiency). This approach aims to help customers (clients) reduce CO2 emissions during building operation. Specifically, as part of the action plan "Promotion of Environmentally Conscious Businesses," based on important ESG issues (Materiality), the company is working on KPIs such as the "ZEB proposal rate for design and construction projects" (target: 100%) and the "number of ZEB certifications for design and construction projects." This is crucial because Scope 3 CO2 emissions (Category

11: Use of sold products) and energy efficiency during building operation significantly impact building operating costs for customers (clients). Therefore, the Obayashi Corporation collaborates with customers (clients) from the planning, sales, and design stages onwards. Additionally, the company is working on another KPI related to the "percentage of renewable energy power introduction for domestically owned rental properties within the group."

Impact of engagement, including measures of success

At the Obayashi Corporation, as part of engagement with customers (clients), the company conducts "Customer Satisfaction Surveys." The Customer Satisfaction rate for the fiscal year 2022 was 97.5%, showing improvement compared to the fiscal year 2021 (95.9%). The collaborative indicator for climate-related issues with customers (clients) is the KPI "ZEB proposal rate for design and construction projects" (target: 100%), and the achievement for the fiscal year 2022 was 100%. Additionally, the KPI "Number of ZEB certifications for design and construction projects" achieved 6 certifications in the fiscal year 2022.

Furthermore, the success indicator for collaboration with customers (clients) is the Scope 3 CO2 emissions of the company (Category 11: Use of sold products). The emissions for this Scope 3 Category 11 decreased from 1,212,342 t-CO2 in the fiscal year 2021 to 855,127 t-CO2 in the fiscal year 2022. In addition, customers (clients) are recognized for their contribution to climate change through the reduction of energy costs during building operation and the decrease in CO2 emissions. The engagement with all customers has resulted in the reduction of CO2 emissions and the promotion of technological innovations such as ZEB. Overall, the engagement with all customers can be considered successful.

C12.1d

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

In pursuit of achieving carbon neutrality by 2050, hydrogen, which does not emit CO2 during the usage stage, is expected to be a crucial energy source for the future. The Obayashi Corporation focuses on 'green hydrogen,' derived from renewable energy that does not involve CO2 emissions during the manufacturing stage. As part of its efforts to build a supply chain for effective hydrogen utilization, the Obayashi Corporation has been engaged in the production and trial sales of green hydrogen utilizing geothermal energy in collaboration with Tuaropaki Trust in New Zealand since December 2021. Additionally, the company has made joint investments with other firms in AFCryo Global Limited, the holding company of FabrumSolutions Limited, which possesses advanced cryogenic separation technology. The synergy between Fabrum's technical expertise and extensive sales network and the Obayashi Corporation's track record and experience aims to further expand the hydrogen business. Domestically, in Kokonoe Town, Kusu District, Oita Prefecture,the Obayashi Corporation commenced the production and supply of green hydrogen utilizing geothermal energy from July 2021. In January 2023, the company supplied it to the hydrogen-mixed combustion burner of an asphalt plant verified by the group company Obayashi Road Corporation in Saga Prefecture. Moreover, in Namie Town, Fukushima Prefecture, since April 2022, as part of an initiative

commissioned by the Ministry of the Environment, the Obayashi Corporation has been conducting a demonstration operation to deliver hydrogen produced from existing renewable sources to multiple locations with high transport efficiency. Through practical applications, the company aims to convey the attractiveness of hydrogen and stimulate demand.
The entire group will continue its collaborative efforts to advance towards decarbonization.

C12.2

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

Yes, climate-related requirements are 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

The Obayashi Group has established the "Obayashi Group CSR Procurement Policy" and the "Obayashi Group CSR Procurement Guidelines (hereinafter referred to as the Guidelines)," requiring suppliers to comply with the Guidelines. The Guidelines specify the promotion of business activities that consider environmental conservation and the reduction of environmental impact, including measures against climate change. It also stipulates compliance with all relevant laws, international treaties, and social norms applicable in the countries and regions where business activities are conducted. All items in these Guidelines, including those mentioned, are stipulated in the contract clauses concluded with suppliers, and confirmation is made at the time of contracting. Additionally, every fiscal year, a survey is conducted to confirm the compliance status of suppliers with the Guidelines. In the fiscal year 2022, the survey was conducted for approximately 1,500 suppliers, achieving a response rate of 89.0%. The procurement ratio from companies responding to the CSR procurement survey was 79%, exceeding the target of 70%. The survey will continue in the future, and efforts will be made to enhance the content of the survey and expand the scope of target companies, thus strengthening supply chain management.

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

100

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

79

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?

Row1

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.

Yes, we fund organizations or individuals whose activities 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)

[The Obayashi Corporation] Nikkenren_Environmental Self-Action Plan for the Construction Industry_7th Edition.pdf

[The Obayashi Corporation] JCLP_20220513_Position Paper on Accelerating the Transition to Zero Emission Vehicles for Commercial Vehicles.pdf

[The Obayashi Corporation] JCLP_20220726_Position Paper on Ensuring Diversity of Renewable Energy Options.pdf

[The Obayashi Corporation] JCLP_ JCLP_20230328_Position Paper for G7.pdf

[The Obayashi Corporation] JCLP_ JCLP_20220406_Position Paper on Overcoming the Climate Crisis Through New Capitalism.pdf

[The Obayashi Corporation] JCLP_ JCLP_20221101_Recommendations on the System Design of Growth-Oriented Carbon Pricing.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.

In the Obayashi Corporation, the President serves as the Vice Chairman (Representative Director) of the Japan Construction Industry Federation (Nikkenren). As a member of the Board of Directors overseeing climate-related risks and opportunities, the President chairs the Sustainability Committee, responsible for examining the response policies to sustainability issues, including climate change, and making recommendations to the Board of Directors. Additionally, the President chairs the Management Meeting, which addresses important matters related to sustainability, including climate change, and is involved in reporting, deliberating, instructing, and making resolutions.

Furthermore, our executive officer serves as a member of the Environmental Committee of Nikkenren, and members of the secretariat (Environmental Management Department) of the "Management Meeting's" sub-organization, the "Environmental Management Specialized Committee," participate as members in Nikkenren's Environmental Committee subcommittees, such as the Environmental Management Subcommittee and the Global Warming Countermeasures Subcommittee. The content discussed in Nikkenren's committees related to climate change is reported and shared through processes such as reporting to the Board of Directors, Management Meeting, Management Planning Committee, and Environmental Management Specialized Committee.

If any inconsistency with the Obayashi Corporation's climate change strategy is identified, members of our company may provide opinions in Nikkenren's committees, potentially influencing public policy indirectly to align with the Obayashi Corporation's climate change strategy.

The recommendations of the Japan Climate Leaders' Partnership (JCLP) have been endorsed by the Obayashi Corporation with the approval of the Board of Directors..

C12.3b

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

Trade association

Other, please specify

Japan Federation of Construction Contractors

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

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

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

JFCCA is a nationwide association of general construction companies and construction contractor associations whose members are engaged in the construction industry. It works to solve basic domestic and international problems in that industry, including various systems related to it. It also aims to promote the sound development of the construction industry in Japan by promoting related technological progress and management improvements, thereby contributing to the enrichment of people's lives and the foundation of industrial activities. The purpose of JFCCA's activities related to climate change countermeasures is to conduct surveys and research on environmental issues related to the construction industry, make proposals, and promote countermeasures. As an organization, JFCCA has established and is promoting the Environment Committee, several specialized subcommittees, including the Environmental Management Subcommittee and the Global Warming Countermeasures Subcommittee, and the Carbon Neutral Measures Working Group. Like the Obayashi Corporation, JFCCA supports the Japanese government's Carbon Neutral by 2050 strategy.

Specifically, the Voluntary Action Plan on the Environment in the Construction Industry (first edition) was formulated in 1996, organizing the construction industry's activities for the environment into three frames based on environmental management: decarbonized society, recycling-oriented society, and society in harmony with nature. In addition, the 7th edition of the Environmental Voluntary Action Plan for the Construction Industry was formulated and published in April 2021, after a review of new targets for a smooth transition to a decarbonized society and circular economy. The 7th edition of the Voluntary Action Plan for the Environment in the Construction Industry sets the goals of reducing CO2 emissions at the construction stage to "aim for a 40% reduction in CO2 emissions per unit of production in the early years of FY2030 to 2040 (compared to FY2013)" and "promote initiatives to achieve virtually zero CO2 emissions at the construction stage by 2050." In addition, the Company has set the following goal for curbing CO2 emissions during operation at the design stage: Promote the contribution of design and construction to global warming prevention to society by identifying and disclosing the amount of CO2 reduction, CO2 reduction rate, and energy conservation performance index values. In FY2022, the president of the Obayashi Corporation was the vice president (representative director) of the JFCCA. In addition, members of the secretariat of Environmental Management Expert Committee participated as members of the Environmental Management Subcommittee and Global Warming Prevention Subcommittee, which are subordinate organizations of the JCIA's Environmental Committee and work together to formulate, implement, and disseminate the Voluntary Action Plan on the

Environment in the Construction Industry. In addition, the Company participates as a member of a study group (Global Warming Prevention Subcommittee) in the construction industry regarding the Keidanren Carbon Neutral Action Plan and is involved in the formulation of said plan and its implementation.

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

C12.3c

(C12.3c) Provide details of the funding you provided to other organizations or individuals in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.

Type of organization or individual

Other, please specify

Japan Climate Leaders Partnership

State the organization or individual to which you provided funding

The Japan Climate Leaders Partnership (JCLP) is a unique Japanese business group that was launched in 2009 with the recognition that industry must develop a healthy sense of urgency and initiate proactive action to achieve a sustainable decarbonized society. By leading the transition to a decarbonized society, the Company aims to become one that is sought after by society. The objective of the activity is to achieve a rapid transition to a decarbonized society and to achieve the 1.5°C target in order to avoid a climate crisis. In addition, the Company's activity policy is to lead Japan in achieving policy change through the five pillars of policy engagement, promoting our own decarbonization, providing solutions to decarbonize society, communicating with society, and collaborating with our global network.

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

200,000

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

By joining and funding the JCLP, which aims to achieve a rapid transition to a decarbonized society and achieve the 1.5°C target to avoid a climate crisis, it becomes

possible to lobby countries and engage them in policies that may affect climate change.

Have you evaluated whether this funding 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

【The Obayashi Corporation】119th Annual Securities Report.pdf

Page/Section reference

- Governance：P17, P43-50, P68-69
- Strategy：P13-14, P17, P29-31
- Risks & Opportunities：P17, P21-22
- Emission targets：P17, P20
- Other metrics：P19-20

Content elements

Governance
Strategy
Risks & Opportunities
Emission targets
Other metrics

Comment

Publication

In voluntary sustainability report

Status

Underway – previous year attached

Attach the document

【The Obayashi Corporation】OBAYASHI Corporate Report 2022.pdf

Page/Section reference

- Governance：P42、P69-70
- Strategy：P13-16, P42
- Risks & Opportunities：P42
- Emissions figures：P87-88
- Emission targets：P42-43、P88
- Other metrics：P36、P88

Content elements

Governance
Strategy
Risks & Opportunities
Emissions figures
Emission targets
Other metrics

Comment

The Obayashi Corporate Report (integrated report) collects important information for understanding the Obayashi Corporation and the Obayashi Group. More detailed information can be found in our ESG Data Book and on our website.

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
Row1	Japan Climate Leaders Partnership (JCLP) Task Force on Climate-related Financial Disclosures (TCFD) United Nations Global Compact	JCLP: The Japan Climate Leaders Partnership (JCLP) is a unique Japanese corporate group launched in 2009 under the recognition that the industry should have a healthy sense of crisis and take proactive action to achieve a sustainable decarbonized society. As a member of JCLP, the Obayashi Corporation aims to lead the transition to a decarbonized society, striving to become a company that society demands. TCFD: In response to the G20's request, the Financial Stability Board (FSB) established the Task Force on Climate-related Financial Disclosures (TCFD) with Michael R. Bloomberg as the chairman to consider how to disclose climate-related information and how financial institutions should respond. Based on the final

		report published in June 2017,the Obayashi Corporation has expressed support for the recommendations and discloses information regarding governance, strategy, risk management, and metrics and targets related to climate-related risks and opportunities. UNGC: The United Nations Global Compact (UNGC) is the world's largest sustainability initiative, bringing together the United Nations and private entities (companies and organizations) to build a healthy global society. Signing companies and organizations, including the Obayashi Corporation, commit to voluntary initiatives for responsible, creative leadership, acting as responsible members of society, and achieving sustainable growth. Underpinning their commitment are the ten principles related to human rights protection, elimination of unfair labor practices, environmental responsiveness, and corruption prevention..

C15 Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related matters 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	The Obayashi Corporation has established a Sustainability Committee under the Board of Directors, chaired by the President and CEO and composed of outside directors and other members, to implement corporate activities based on the Obayashi Corporation basic philosophy and to promote efforts to achieve sustainability for society and itself. The Sustainability Committee shall meet at least twice a year to identify sustainability issues, review and recommend policies to address the identified sustainability issues, and review their implementation in execution. Based on discussions at the Sustainability Committee, the Board of Directors will determine management policies for promoting ESG management and achieving the SDGs. On the business execution side, the Corporate Planning Committee and the specialized committees in each sustainability field established within the Corporate Planning Committee, which are commissioned by the President, are responsible for formulating and promoting measures in line

		with the management policy decided by the Board of Directors, monitoring implementation status, disseminating information and promoting internal penetration, and promoting group-wide initiatives. The Environmental Management Expert Committee, chaired by the director in charge of the environment, was established within the above-mentioned specialized committees to formulate strategies and policies for the Obayashi Group's environmental management, review targets and activities based on performance evaluations of the EMS, and promote continuous improvement. Based on the plans and targets set by the Environmental Management Committee, the divisions in charge of the environment at the head office, each head office and branch, and group companies are promoting and implementing specific activities.

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	Initiatives endorsed
Row 1	Yes, we have endorsed initiatives only	CBD - Global Biodiversity Framework

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 and we don't plan to within the next two years.

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

No and we don't 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?
Row 1	No, and we do not plan to undertake any biodiversity-related actions

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	

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
No publications		

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	Representative Director President (From April 2023, "President and CEO")	President

SC Supply chain

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

Change in Scope
Until CDP 2022 (FY2021 performance), we reported the performance of the domestic standalone entity. However, starting from CDP 2023 (FY2022 performance), we report the consolidated performance of the Obayashi Group.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual revenue
Row 1	1,983,888,000,000

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member
Toyota Motor Corporation

Scope of emissions
Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level
Company wide

Allocation level detail

Emissions in metric tons of CO2e
6,508.37

Uncertainty (± %)

10

Major sources of emissions

Total CO2 emissions under Scope 1 and Scope 2.
Scope 1 and Scope 2 are CO2 emissions calculated from use of power, diesel, kerosene, gas, etc. consumed at the construction sites.

Verified

Yes

Allocation method

Other, please specify

It is calculated by multiplying the volume of completed construction in FY2022 in projects ordered by clients with CO2 emission intensity per construction project in FY2022 (construction).

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

We have tracked use of electricity, diesel, kerosene, and gas at our construction sites based on the calculation criteria in the Guidelines for Environmental Accounting in Construction (JFCC) with regard to Scope 1 and 2 emissions.
More concretely, we tally energy use through our own CO2 emission aggregation systems and calculate emissions as well as O2 emission intensity per construction project.

Requesting member

NEC Corporation

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tons of CO2e

1,804.17

Uncertainty (± %)

10

Major sources of emissions

Total CO2 emissions under Scope 1 and Scope 2.
Scope 1 and Scope 2 are CO2 emissions calculated from use of power, diesel, kerosene, gas, etc. consumed at the construction sites.

Verified

Yes

Allocation method

Other, please specify

It is calculated by multiplying the volume of completed construction in FY2022 in projects ordered by clients with CO2 emission intensity per construction project in FY2022 (construction).

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

We have tracked use of electricity, diesel, kerosene, and gas at our construction sites based on the calculation criteria in the Guidelines for Environmental Accounting in Construction (JFCC) with regard to Scope 1 and 2 emissions.
More concretely, we tally energy use through our own CO2 emission aggregation systems and calculate emissions as well as O2 emission intensity per construction project.

Requesting member

EQUINIX, INC.

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level
Company wide

Allocation level detail

Emissions in metric tons of CO2e
93.98

Uncertainty (± %)
10

Major sources of emissions
Total CO2 emissions under Scope 1 and Scope 2.
Scope 1 and Scope 2 are CO2 emissions calculated from use of power, diesel, kerosene, gas, etc. consumed at the construction sites.

Verified
Yes

Allocation method
Other, please specify

It is calculated by multiplying the volume of completed construction in FY2022 in projects ordered by clients with CO2 emission intensity per construction project in FY2022 (construction).

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
We have tracked use of electricity, diesel, kerosene, and gas at our construction sites based on the calculation criteria in the Guidelines for Environmental Accounting in Construction (JFCC) with regard to Scope 1 and 2 emissions.
More concretely, we tally energy use through our own CO2 emission aggregation systems and calculate emissions as well as O2 emission intensity per construction project.

Requesting member
Infineon

Scope of emissions
Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level
Company wide

Allocation level detail

Emissions in metric tons of CO2e
93.72

Uncertainty (± %)
10

Major sources of emissions
Total CO2 emissions under Scope 1 and Scope 2.
Scope 1 and Scope 2 are CO2 emissions calculated from use of power, diesel, kerosene, gas, etc. consumed at the construction sites.

Verified
Yes

Allocation method
Other, please specify

It is calculated by multiplying the volume of completed construction in FY2022 in projects ordered by clients with CO2 emission intensity per construction project in FY2022 (construction).

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
We have tracked use of electricity, diesel, kerosene, and gas at our construction sites based on the calculation criteria in the Guidelines for Environmental Accounting in Construction (JFCC) with regard to Scope 1 and 2 emissions.
More concretely, we tally energy use through our own CO2 emission aggregation systems and calculate emissions as well as O2 emission intensity per construction project.

Requesting member
Nomura Research Institute, Ltd.

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tons of CO2e

48.68

Uncertainty (± %)

10

Major sources of emissions

Total CO2 emissions under Scope 1 and Scope 2.
Scope 1 and Scope 2 are CO2 emissions calculated from use of power, diesel, kerosene, gas, etc. consumed at the construction sites.

Verified

Yes

Allocation method

Other, please specify

It is calculated by multiplying the volume of completed construction in FY2022 in projects ordered by clients with CO2 emission intensity per construction project in FY2022 (construction).

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

We have tracked use of electricity, diesel, kerosene, and gas at our construction sites based on the calculation criteria in the Guidelines for Environmental Accounting in Construction (JFCC) with regard to Scope 1 and 2 emissions.
More concretely, we tally energy use through our own CO2 emission aggregation systems and calculate emissions as well as O2 emission intensity per construction project.

Requesting member

Daiichi Sankyo Co., Ltd.

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tons of CO2e

44.09

Uncertainty (± %)

10

Major sources of emissions

Total CO2 emissions under Scope 1 and Scope 2.
Scope 1 and Scope 2 are CO2 emissions calculated from use of power, diesel, kerosene, gas, etc. consumed at the construction sites.

Verified

Allocation method

Other, please specify

It is calculated by multiplying the volume of completed construction in FY2022 in projects ordered by clients with CO2 emission intensity per construction project in FY2022 (construction).

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

We have tracked use of electricity, diesel, kerosene, and gas at our construction sites based on the calculation criteria in the Guidelines for Environmental Accounting in Construction (JFCC) with regard to Scope 1 and 2 emissions.

More concretely, we tally energy use through our own CO2 emission aggregation systems and calculate emissions as well as O2 emission intensity per construction project.

Requesting member

Microsoft Corporation

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tons of CO2e

0

Uncertainty (± %)

10

Major sources of emissions

Total CO2 emissions under Scope 1 and Scope 2.

Scope 1 and Scope 2 are CO2 emissions calculated from use of power, diesel, kerosene, gas, etc. consumed at the construction sites.

Verified

Yes

Allocation method

Other, please specify

It is calculated by multiplying the volume of completed construction in FY2022 in projects ordered by clients with CO2 emission intensity per construction project in FY2022 (construction).

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

We have tracked use of electricity, diesel, kerosene, and gas at our construction sites based on the calculation criteria in the Guidelines for Environmental Accounting in Construction (JFCC) with regard to Scope 1 and 2 emissions.

More concretely, we tally energy use through our own CO2 emission aggregation systems and calculate emissions as well as O2 emission intensity per construction project.

Requesting member

Comcast Corporation

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tons of CO2e

0

Uncertainty (± %)

10

Major sources of emissions

Total CO2 emissions under Scope 1 and Scope 2.

Scope 1 and Scope 2 are CO2 emissions calculated from use of power, diesel, kerosene, gas, etc. consumed at the construction sites.

Verified

Allocation method

Other, please specify

It is calculated by multiplying the volume of completed construction in FY2022 in projects ordered by clients with CO2 emission intensity per construction project in FY2022 (construction).

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

We have tracked use of electricity, diesel, kerosene, and gas at our construction sites based on the calculation criteria in the Guidelines for Environmental Accounting in Construction (JFCC) with regard to Scope 1 and 2 emissions.

More concretely, we tally energy use through our own CO2 emission aggregation systems and calculate emissions as well as O2 emission intensity per construction project.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

ESG Data Book

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Managing the different emission factors of diverse and numerous geographies makes calculating total footprint difficult	Construction offices and sites are set up and managed temporarily in the construction industry, so we calculate total emissions for the whole corporation based on project intensity in sampling surveys. It is possible to calculate emissions by individual client from their proportion (ratio) of annual projects, so we report these emissions to clients who request it, but do not calculate emissions for clients who do not need it themselves.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

No

SC1.4b

(SC1.4b) Explain why you do not plan to develop capabilities to allocate emissions to your customers.

Construction offices and sites are set up and managed temporarily in the construction industry, so we estimate totals based on sampling surveys. Because of this, we cannot accurately calculate emissions by individual client.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

Requesting member

Toyota Motor Corporation

Group type of project

Change to provision of goods and services

Type of project

Other, please specify

Proposal and provision of energy efficient buildings

Emissions targeted

Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized

Other, please specify

From product delivery to end of use

Estimated lifetime CO2e savings

0

Estimated payback

Details of proposal

Requesting member

NEC Corporation

Group type of project

Change to provision of goods and services

Type of project

Other, please specify

Proposal and provision of energy efficient buildings

Emissions targeted

Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized

Other, please specify

From product delivery to end of use

Estimated lifetime CO2e savings

0

Estimated payback

Details of proposal

Requesting member

EQUINIX, INC.

Group type of project

Change to provision of goods and services

Type of project

Other, please specify

Proposal and provision of energy efficient buildings

Emissions targeted

Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realize

Other, please specify

From product delivery to end of use

Estimated lifetime CO2e savings

0

Estimated payback

Details of proposal

Requesting member

Infineon

Group type of project

Change to provision of goods and services

Type of project

Other, please specify

Proposal and provision of energy efficient buildings

Emissions targeted

Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realize

Other, please specify

From product delivery to end of use

Estimated lifetime CO2e savings

0

Estimated payback

Details of proposal

Requesting member

Nomura Research Institute, Ltd.

Group type of project

Change to provision of goods and services

Type of project

Other, please specify

Proposal and provision of energy efficient buildings

Emissions targeted

Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realize

Other, please specify

From product delivery to end of use

Estimated lifetime CO2e savings

0

Estimated payback

Details of proposal

Requesting member

Daiichi Sankyo Co., Ltd.

Group type of project

Change to provision of goods and services

Type of project

Other, please specify

Proposal and provision of energy efficient buildings

Emissions targeted

Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realize

Other, please specify

From product delivery to end of use

Estimated lifetime CO2e savings

0

Estimated payback

Details of proposal

Requesting member

Microsoft Corporation

Group type of project

Change to provision of goods and services

Type of project

Other, please specify

Proposal and provision of energy efficient buildings

Emissions targeted

Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realize

Other, please specify

From product delivery to end of use

Estimated lifetime CO2e savings

0

Estimated payback

Details of proposal

Requesting member

Comcast Corporation

Group type of project

Change to provision of goods and services

Type of project

Other, please specify

Proposal and provision of energy efficient buildings

Emissions targeted

Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realize

Other, please specify

From product delivery to end of use

Estimated lifetime CO2e savings

0

Estimated payback

Details of proposal

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to undertake organizational-level emissions reduction initiatives?

No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

No, I am not providing data

Submission of Your Response

In which language do you submit your response?

Japanese

Please confirm how you would like your response to be handled by the CDP.

	We understand that our response will be shared with all parties requesting the response	Publicly available/ Not publicly available

We submit the response.	Yes	Publicly available

Please confirm below.

We read the terms and conditions and agree to them.