

TAIHEIYO CEMENT CORPORATION

Transition-Linked Loan Framework

March 8, 2023

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1. Introduction

1.1 Background and Outline of the Framework Formulation

- TAIHEIYO CEMENT CORPORATION (hereinafter referred to as “the company”) has formulated the Transition-Linked Loan Framework (hereinafter referred to as “this framework”) as follows.
- The coverage of this framework is the Transition-Linked Loan (hereinafter referred to as “this TLL”) which promotes Sustainability Performance Targets (SPTs) achievement of the borrower by interlocking the pre-determined achievement level of SPTs with loan conditions, etc.
- The company is planning financing through this TLL and will take various measures with all-out efforts to realize carbon neutrality in the whole supply chain in the group’s “Carbon Neutral Strategy 2050”.
- The company considers that financing through this TLL will assure our ability to take the maximum measures possible for the realization of the above in the future, and that it will be a trigger to promote efforts for a decarbonized society through communications with stakeholders.
- The company has obtained third-party opinions on the adaptability of the following standards related to this framework from a third party evaluation organization - Japan Credit Rating Agency, Ltd.

Standards, etc.	Preparing body
Climate Transition Finance Handbook	ICMA
Basic Guidelines on Climate Transition Finance	Financial Services Agency, Ministry of Economy, Trade and Industry, Ministry of the Environment
Guidance on Sustainability-Linked Loan Principles (Revised in March 2022)	LMA, etc.
Green Loan and Sustainability Linked Loan Guidelines (revised in July 2022)	Ministry of the Environment

1.2 Company outline

- The company was established through the merger of Chichibu Onoda Cement Corporation, with over a 100-year-old history, and Nihon Cement Co., Ltd. in October 1998. Our group companies continue to support infrastructure by supplying high-quality cement and construction materials with advanced technology from 9 cement plants in Japan and 8 plants in the Pacific Rim region including US, China and Southeast Asia. The company aims to build a sustainable society making the most of all our abilities.
- Our group companies have production and distribution centers at home and abroad, building a stable supply system for cement and resource products. In addition, using the one of the world's best environmental technologies for cement production, we contribute to the realization of a recycling-based society and climate change countermeasures.

1.3 Corporate philosophy and action policies for the environment

- The management philosophy of our group companies is to “contribute to social infrastructure development by providing solutions that are environmentally efficient, enhance our competitive position and bring value to our stakeholders.”
- Under this philosophy, we aim to become a “leading company in the Pacific Rim region” in core businesses such as domestic cement business, mineral resources business, environmental business, international business, and construction materials business. By making the most of the properties of cement plants that can treat and recycle a large amount of waste and byproducts as well as the recycling technology which has been cultivated for many years, the company has contributed to the realization of the preservation of the planet and a recycling-based society.
- To realize the management philosophy, we formulated the group companies' business principles in 9 sections and are striving to implement them.

<Group management philosophy and business principles>

Mission of the Taiheiyo Cement Group

Our mission is to contribute to social infrastructure development by providing solutions that are environmentally efficient, enhance our competitive position and bring value to our stakeholders.

Business Principles Governing the Way the Company Conducts Business

We are committed to maximizing our corporate value by generating synergies among Taiheiyo Cement Group companies.

We aim to manage the environmental impact of our operations while supporting the development of a recycling-based society.

We will act in an ethical manner and abide by the laws and regulations of those countries in which we operate.

We will openly communicate with our stakeholders and proactively report on our business activities in a transparent manner.

We are committed to the ongoing development and application of innovative technologies in order to provide products and services that benefit our customers and society.

We are committed to maintaining an international outlook and conducting our business in accordance with global standards.

We will strive to anticipate the changing business environment to assess new opportunities for growth.

We are committed to achieving our full potential through training and self-development.

We are devoted to providing a safe and healthy working environment where our employees are valued and the human rights of all individuals involved in our business are respected.

Under the Mission of the Taiheiyo Cement Group, which was established in June 2002, the company pledges to focus its management on the triple bottom line of the economy, the environment and society, to realize sustainable development, a shared principle of the GCCA of which we are a member.

In December 2002 we formulated the Business Principles of Taiheiyo Cement, which comprise nine principles for realizing the Mission of the Taiheiyo Cement Group, and are striving to implement them.

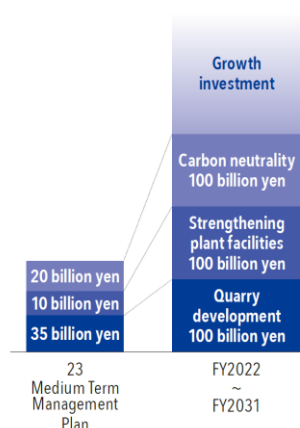
(Source: Taiheiyo Cement Report 2022)

- In addition, in order to strengthen the business foundation to support sustainable growth, our group companies formulated key strategies for medium-to-long-term investment focusing on the business environment during the 10 years between FY 2021 and 2030 including the period of the 23 Medium-Term Management plan. In addition to the sustained growth investment such as overseas M&As and domestic development of new products, a total of 300 billion yen (100 billion yen each) is planned to be invested in (1) initiatives to deliver carbon neutrality, (2) strengthening plant facilities and (3) quarry development.

<Key strategies including the 23 Medium-Term Management plan (FY 2021 - 2023)>

Key Strategies

- 1 Sustained growth investment**
- 2 Initiatives to deliver carbon neutrality**
- Initiatives to deliver carbon neutrality by 2050 (Growth strategy)
- 3 Strengthening plant facilities**
- In order to establish a production and supply system with long-term stability by 2030, we will renew key machinery, upgrade production and equipment management and deploy AI.
- 4 Quarry Development**
- We will establish a long-term stable supply system for limestone resources by 2030



(Source: Taiheiyo Cement Report 2022)

- Out of these 4 key strategies, the change of global awareness and the social situation regarding global warming has an extremely important meaning for the global cement industry, and efforts to become carbon neutral must be undertaken. Our group companies are leading technological development to realize carbon neutrality as a leading company in Japan's cement industry.
- At the same time, investing a considerable amount of capital and labor to strengthen plant facilities and limestone mines for long-term table production is a strong message by our group companies that we will become a leading company which continues to grow in the core cement business under rapid and considerable changes in social situations and the business environment.

2. Disclosed Information based on Climate Transition Finance Handbook and Basic Guidelines on Climate Transition Finance

2.1 Disclosure status

- This framework is formed to comply with the following 4 elements shown in the “Climate Transition Finance Handbook” and “Basic Guidelines on Climate Transition Finance.”

4 elements of transition finance		Points explained
Element 1	Climate transition strategy and governance of fund raisers	2.2
Element 2	Environmental materiality in a business model	2.3
Element 3	Climate transition strategy with scientific evidence	2.4
Element 4	Transparency of implementation	2.5

2.2 Element 1: Climate transition strategy and governance of fund raisers

2.2.1 About transition strategy

- In May 2021, our group companies published “Carbon Neutral Strategy 2050.”
- In March 2022, the group formulated a technological development roadmap for “Carbon Neutral Strategy 2050” and 2030 Interim Target.
- In the cement industry, which produces a significant amount of CO₂ emissions, establishment of carbon neutral technologies is the highest priority issue linked to the future of the industry. At the same time, it is positioned as a growth strategy of our group companies.
- Accordingly, we established a “carbon-neutral technological development project team” to make all- out efforts to realize carbon neutrality in the entire supply chain in 2050.

<Positioning of carbon neutrality in the management philosophy of our group companies>

Mission of the Taiheiyo Cement Group "Our mission is to contribute to social infrastructure development by providing solutions that are environmentally efficient, enhance our competitive position, and bring value to our stakeholders."

Carbon Neutral Strategy 2050
Total commitment to achieve carbon neutrality throughout the supply chain

- For the Taiheiyo Cement Group's sustainable growth, it is essential to achieve carbon neutrality while fulfilling the Group's role in both arterial and venous industries.
- One of the most important elements of the growth strategy is to quickly establish carbon-neutral technologies that can be implemented in society.



(Source: Taiheiyo Cement Group, "Carbon Neutral Strategy 2050")

- Our group companies will work on initiatives towards 2030 and 2050 to realize carbon neutrality in 2050.
- As an initiative towards 2030, the group will invest 100 billion yen with the aim to maximize the use of existing technologies (energy saving, low-CO₂ energy/cement) and completing innovative technology development (CO₂ capture and utilization).
- As an initiative towards carbon neutrality in 2050, the group will realize carbon neutrality throughout the whole supply chain through the sequential development of innovative technologies.

<Initiatives towards 2030 and 2050>

Target for 2030

Domestic and overseas group targets (compared to 2000)
2030 Interim Target*: Reduce CO₂ emissions intensity by 20% or more throughout the supply chain*¹

* Reduction of CO₂ emissions (domestic): 40% or more compared to 2000

1. Develop and introduce technologies to pursue carbon neutrality

- Maximum use of existing technologies (energy conservation, low-CO₂ energy and cement)*²
- Completion of innovative technology development (CO₂ capture and utilization)

2. Investment of 100 billion JPY (approx. 800 million USD) toward carbon neutrality

Carbon neutrality by 2050

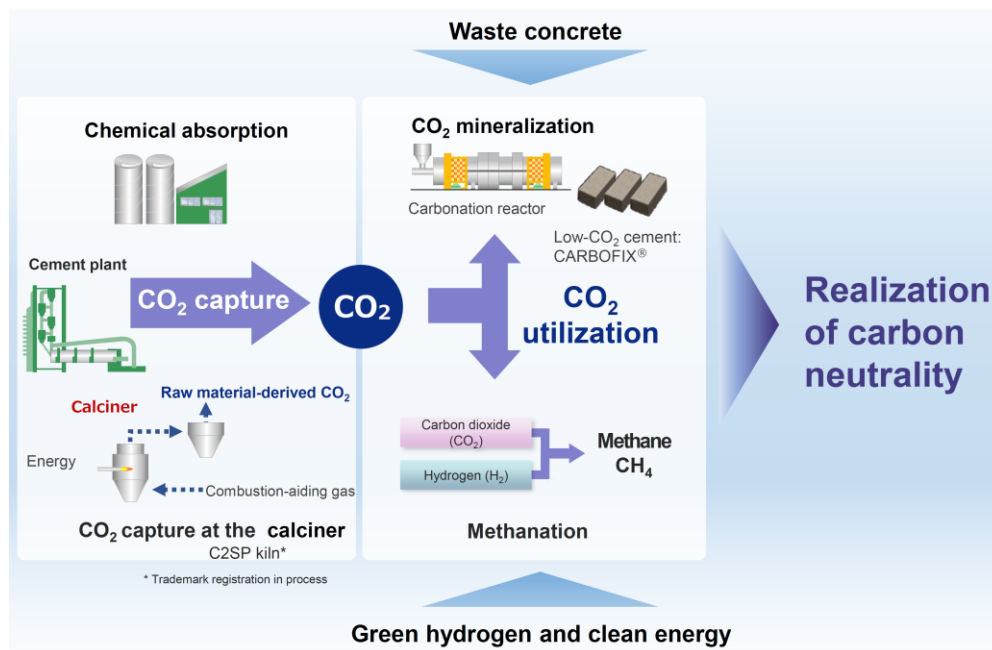
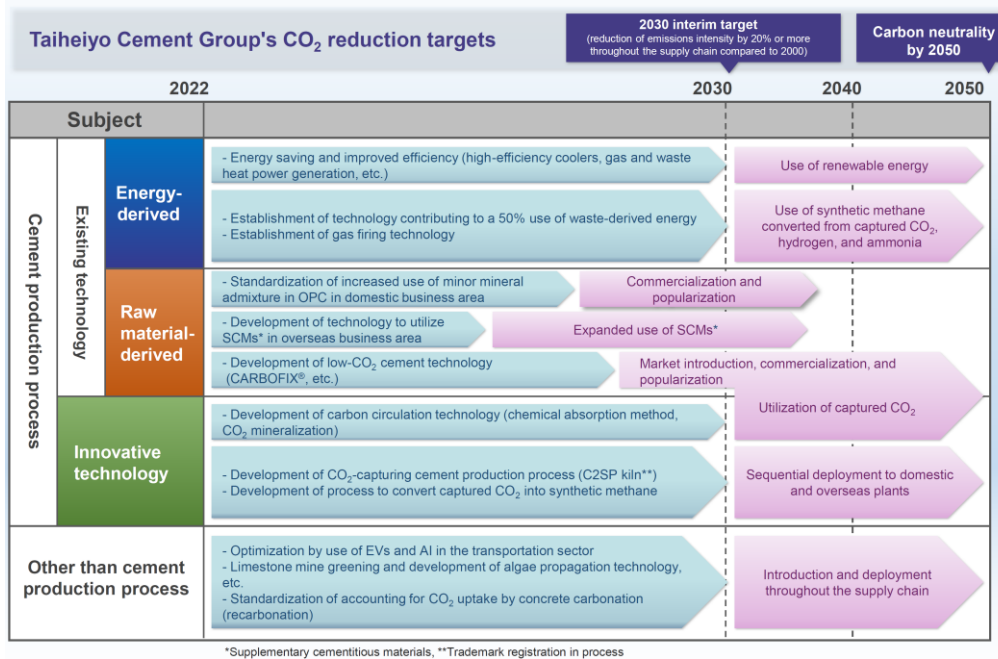
1. Sequential deployment of innovative technologies
2. Achievement of carbon neutrality throughout the supply chain

*1 Supply chain: A series of processes involving cement as a commodity, such as raw cement material procurement, production, distribution, use of concrete, and recycling (see p. 3), including scopes 1, 2, and 3 (subject to change due to scope expansion, etc.)
*2 Low-CO₂ cement: Cement using low-CO₂ clinker, blended cement, cement using carbonation process, and the like

(Source: Taiheiyo Cement Group, “Carbon Neutral Strategy 2050”)

- About 60% of CO₂ generated in cement production processes is from raw materials and about 40% is from energy. We will reduce CO₂ emissions from raw materials by using our existing technologies such as the technological development of low-carbon cement and the utilization of admixtures from overseas. We are planning to reduce CO₂ emissions from energy by our existing technologies such as high-efficiency coolers and gas/waste heat power generation, which contribute to energy-saving and high-efficiency.
- However, in order to reduce CO₂ from raw materials and realize carbon neutrality, it is necessary to develop innovative technologies as well as using existing technologies. Therefore, in addition to utilizing the above existing technologies, we have been working on the “development of carbon circulation technology” from 2020, which includes technologies such as, amine absorption chemical method, and CO₂ utilization technology, which uses cement and concrete-based materials for carbonation. From 2021, the company is also implementing “CO₂ -capturing cement production process and methanation technology development” and will further sequentially develop these innovative technologies.

<Development of technological development road map and innovative technologies>



(Source: Taiheiyo Cement Group, "Carbon Neutral Strategy 2050")

- Through the aforementioned measures, as the interim goal for the realization of 2050 carbon neutrality, the group companies aim to reduce the CO₂ emissions intensity in the supply chain by 20% from FY 2000 and reduce domestic CO₂ emissions by 40% from FY 2000 by FY 2030.

<Initiatives towards 2030 and 2050>

Target for 2030

Domestic and overseas group targets (compared to 2000)

2030 Interim Target*: Reduce CO₂ emissions intensity by 20% or more throughout the supply chain*¹

* Reduction of CO₂ emissions (domestic): 40% or more compared to 2000

1. Develop and introduce technologies to pursue carbon neutrality

- Maximum use of existing technologies (energy conservation, low-CO₂ energy and cement)*²
- Completion of innovative technology development (CO₂ capture and utilization)

2. Investment of 100 billion JPY (approx. 800 million USD) toward carbon neutrality

Carbon neutrality by 2050

1. Sequential deployment of innovative technologies

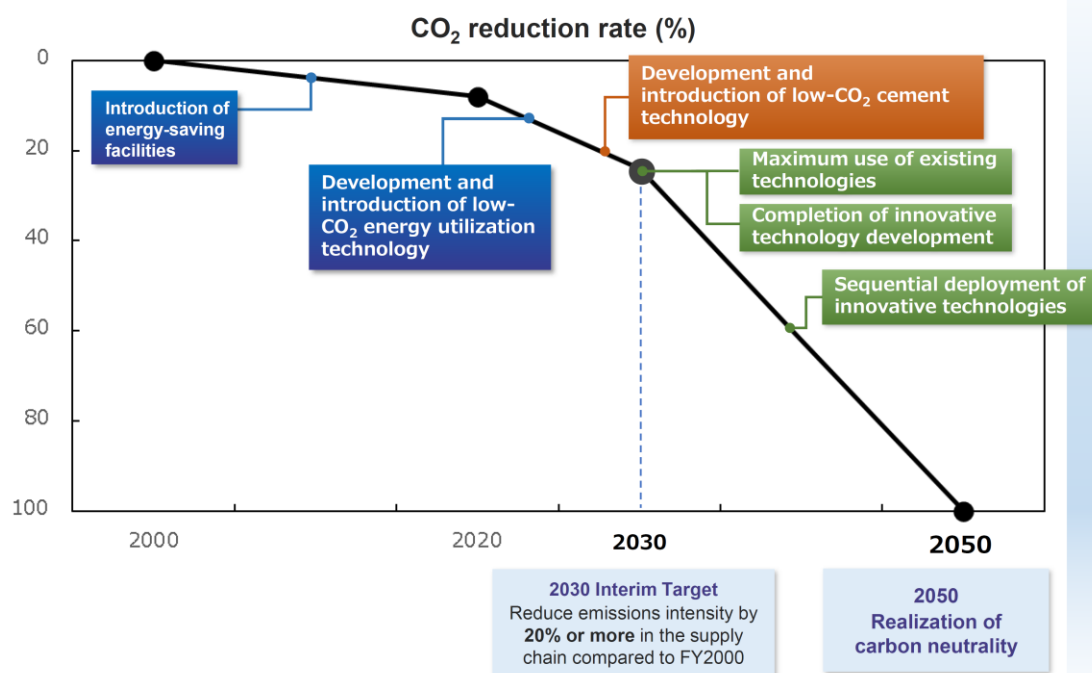
2. Achievement of carbon neutrality throughout the supply chain

*¹ Supply chain: A series of processes involving cement as a commodity, such as raw cement material procurement, production, distribution, use of concrete, and recycling (see p. 3), including scopes 1, 2, and 3 (subject to change due to scope expansion, etc.)

*² Low-CO₂ cement: Cement using low-CO₂ clinker, blended cement, cement using carbonation process, and the like

(Source: Taiheiyo Cement Group, "Carbon Neutral Strategy 2050")

<Scenario for Delivering Carbon Neutrality>

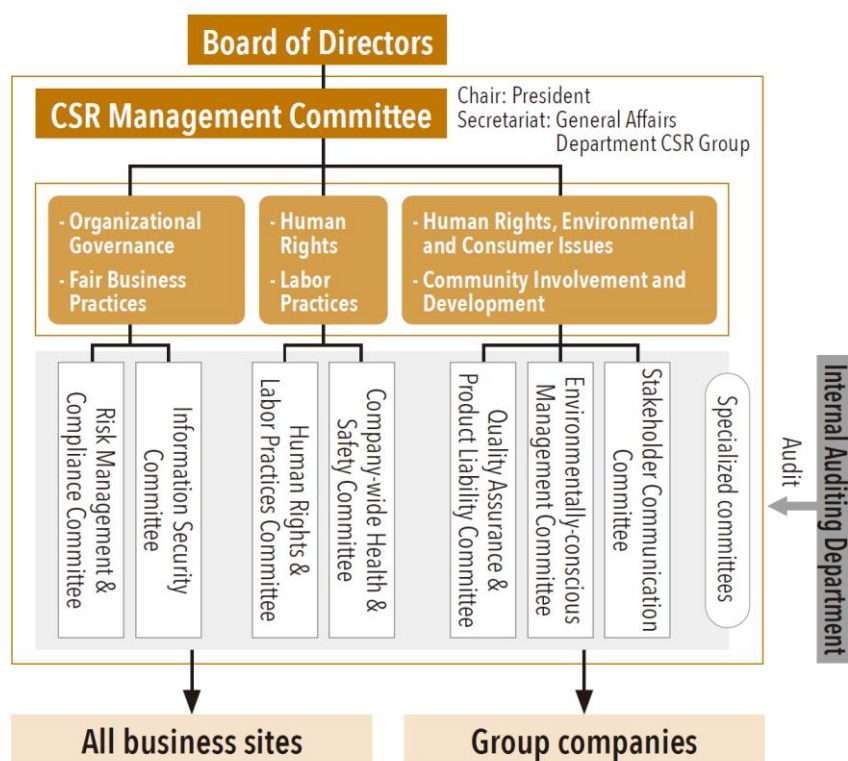


(Source: Taiheiyo Cement Report 2022)

2.2.2 About governance

- We have established the CSR Management Committee, which is chaired by the company president. The committee comprises cross-organizationally all board members and executives under the direct control of the board of directors to promote CSR management. The CSR Management Committee discusses important matters such as CSR activity implementation plans, and reviews the status of CSR activity implementation.
- Seven expert committees are established under the CSR Management Committee to work on individual CSR issues more specifically. The responsible director takes the role of chairperson in each expert committee and the department with the closest relationship to the issue functions as the secretariat.

<Promotional structure of CSR management>



(Source: Taiheiyo Cement Report 2022)

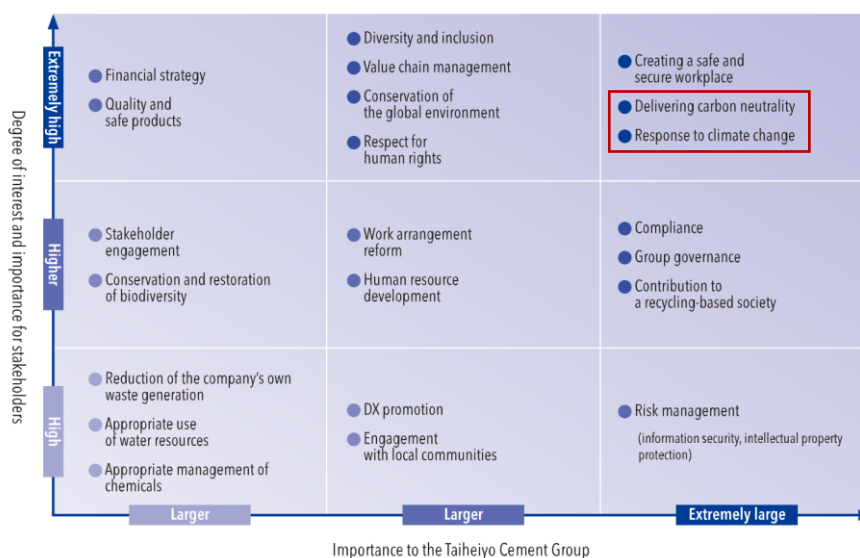
2.3 Element 2: Environmental materiality in a business model

- Sustainability issues are extracted and specified from international guidelines, information from stakeholders and the company's business details.
- Twenty-two important issues are specified from the above specified sustainability issues

after considering what important themes the group companies have and prioritized in internal discussions.

- In the environmental field in particular, “realization of carbon neutrality” and “response to climate change” are positioned as priority issues with extremely high interest and importance for stakeholders and extremely large importance for the group companies.

<Steps for considering priority issues (materiality)>



(Source: Taiheiyo Cement Report 2022)

2.4 Element 3: Climate transition strategy with scientific evidence

- In June 2019, the company endorsed the recommendations of TCFD and set scenarios up to 2050 regarding business risks and opportunities which climate change could

provide to the group companies and carried out an evaluation and analysis. The company set out scenarios which have important impacts on climate-related risks and opportunities by using a climate-related long-term scenario developed based on scientific evidence including IEA “World Energy Outlook (WEO),” “Energy Technology Perspectives (ETP)” and IPCC “The 5th Assessment Report (AR5).” Looking at the 2030s in reference to the IEA World Energy Outlook 2021, we have set two CO₂ reduction scenarios (1.5°C, 4°C) which impact our business with an appropriate carbon price assumption. After that, we analyzed business impacts on each scenario by size and period (short, medium and long term).

<Outline of climate-related scenario analysis>

Scenario Overview
Business Impact

Risks to observe and their negative impact on our business
 Large ↓ Medium ↓ Small ↓

Opportunities in the execution of our strategy and their positive impact on our business
 Large ↑ Medium ↑ Small ↑

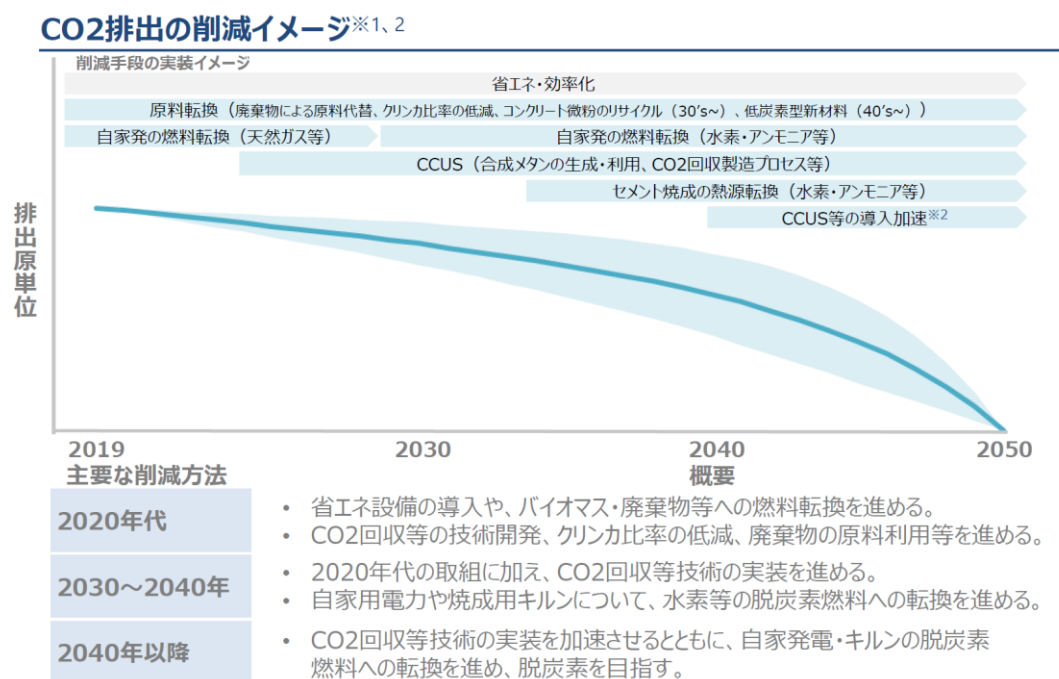
Category	Drivers	1.5°C Scenario		4°C Scenario	
		Negative	Positive	Negative	Positive
1. Policy and Regulatory	● Introduction of Regulated Carbon Pricing Reinforcement of regulations on CO ₂ emissions		↑	↓	
	● Rising fossil fuel prices	↓		↓	
2. Market	● Increased demand for low-carbon construction materials		↑		↑
	● Reduced operation of coal-fired thermal power plants	↓		↓	
3. Technologies	● Progress in the development of CO ₂ capture and utilization technology		↑	↓	
	● Improved technologies for resource recycling and advanced circular economies		↑		↑
4. Reputation	● Increased awareness toward carbon neutrality		↑	↓	
5. Physical events	● Chronic - Rising average temperatures and sea levels	↓	↑	↓	↑
	● Acute - Intensification of climatic events (e.g., flooding, heat waves)	↓	↑	↓	↑

(Source: Taiheiyo Cement Report 2022)

- The group companies’ transition strategy has a long-term objective of carbon neutrality throughout the entire supply chain in 2050 and works on measures which comply with the technical road map on “transition finance” in the cement field, published by the Ministry of Economy, Trade and Industry (METI) in March 2022.
- The sectoral road map shows the aim of Japan to achieve carbon neutrality by 2050 based on scientific evidence. It includes possible ways to reduce carbon emissions steadily, as well as future innovative technologies along with the background and time axis, which refers to domestic policies and international scenarios. We believe that the

group's transition strategy, which is consistent with this sectoral road map, has a scientific basis.

<Technical road map in the cement field>



(Source: METI, Technical Road Map in Cement Field on “Transition Finance”) (In Japanese)

2.5 Element 4: Transparency of implementation

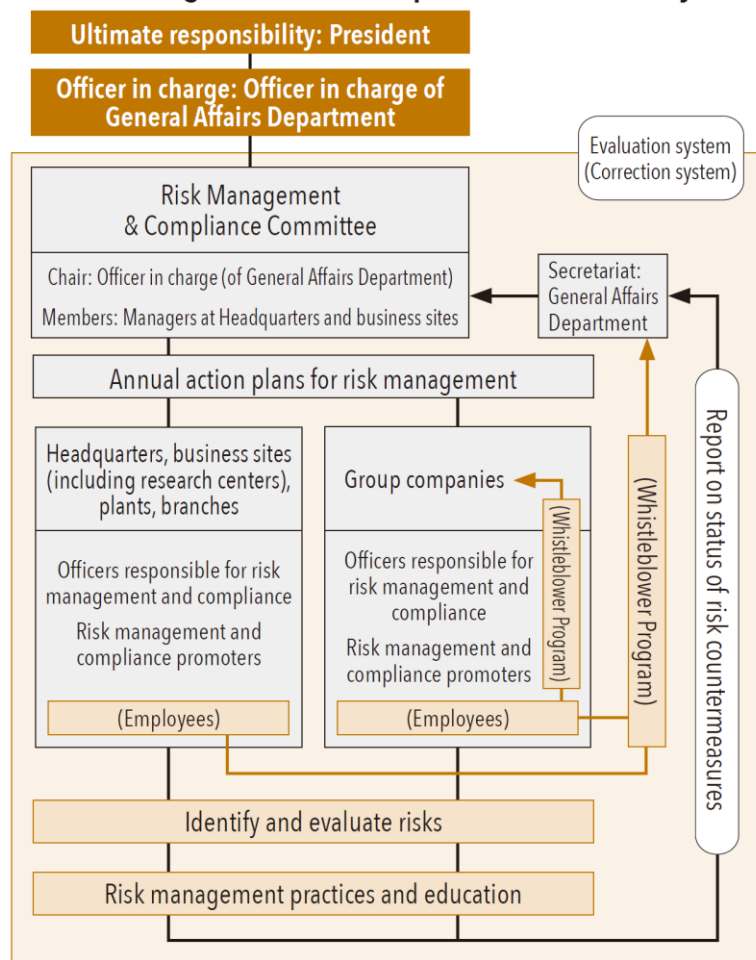
- As mentioned above, as for the investment relating to the transition strategy, the group will invest 100 billion yen towards 2030 with the aim to maximize the use of existing technologies (energy saving, low-CO₂ energy/cement) and realizing innovative technology development (CO₂ capture and utilization). In addition, toward carbon neutrality by 2050, the group will realize carbon neutrality throughout the whole supply chain through the sequential development of innovative technologies.
- In addition, to strengthen the business foundation that supports sustainable growth, we aim to work on sustained growth investment, initiatives to deliver carbon neutrality, strengthening plant facilities and mines and restructuring of domestic business as priority issues. In particular, in the cement industry where CO₂ emissions from raw materials cannot be avoided, the establishment of technologies to bring CO₂ emissions to net zero is one of the most important issues that will lead to the future of the industry. We recognize that the realization of carbon neutrality is the core of our growth strategy.
- In the “Business Principles” of our group companies, we declare that we will “strive to

anticipate the changing business environment to assess new opportunities for growth.” Risk management reduces uncertainty in business management and it is considered to be the foundation to achieve management objectives. Risks which could trigger uncertainty in the achievement of management objectives such as social change, changes in the environment, natural disasters, accidents and scandals are managed based on the “Basic Risk Management Policy.” We established “risk management regulations” so that we can use the “Basic Risk Management Policy” in specific risk management activities. The rules on risk management include responses in an emergency.

- In addition, while placing the company president as the chief executive of risk management and compliance promotion, the officer in charge assigned by the president (officer in charge of General Affairs Department) will hold and manage the “risk management and compliance committee” to promote activities in an organizational and planned manner. The committee takes the core role in risk management and compliance promotion in all our group companies, including the development of policies, extraction, assessment and identification of risks in all companies, risk management activities through PDCA cycle and compliance promotion. It also establishes and revises rules on risk management and compliance, raises awareness of employees and promotes education. In each of our business branches and group companies, we placed an “officer responsible for risk management and compliance” and a “risk management and compliance promoter” to take specific measures; four committee meetings were held in FY 2021.

<Risk Management and Compliance Promotion System>

● Risk Management and Compliance Promotion System



* Subject to risk management: 101 group companies (as of March 31, 2022)

(Source: Taiheiyo Cement Report 2022)

3. Compliance with Five Principles in Guidance on Sustainability-Linked Loan Principles, etc.

3.1 Compliance status

- This framework is formulated to comply with the following five principles shown in Guidance on Sustainability-Linked Loan Principles (revised in March 2022) and Green Loan and Sustainability Linked Loan Guidelines (revised in July 2022).

Five Principles in Guidance on Sustainability-Linked Loan Principles, etc.		Points explained
Principle 1	Selection of KPIs	3.2
Principle 2	Calibration of SPTs	3.3
Principle 3	Loan Characteristics (economic conditions)	3.4
Principle 4	Reporting	3.5
Principle 5	Verification	3.6

3.2 Principle 1: Validity of KPIs Selection

- In this framework, the “CO₂ emissions intensity” and the “amount of CO₂ emissions” are used as KPI.
- Out of our group companies’ key strategies for medium-to-long-term investment which were formulated from the viewpoint of the business environment for 10 years between FY 2021 and FY 2030 including the 23 Medium-Term Management plan, changes in the world awareness of global warming and in social situations have an extremely important meaning to the global cement industry. Our group companies will lead technological development for carbon neutrality as a leading company in Japan’s cement industry.
- Moreover, as a policy of our group companies, we will realize carbon neutrality in the whole supply chain. We consider that the above KPI is a meaningful index that contributes to the achievement of the objectives of the “Carbon Neutral Strategy 2050” in our group companies.

3.3 Principle 2: Calibration of SPTs

- In this framework, we set the “reduction of the CO₂ emissions intensity in the supply chain by 20% from FY 2000 by FY 2030” and the “reduction of domestic CO₂ emissions by 40% from FY 2000 by FY 2030” as SPTs.

- In March 2022, the group formulated a technological development roadmap for “Carbon Neutral Strategy 2050” and 2030 Interim Target and published two aforementioned objectives for FY 2030.
- The “Carbon Neutral Strategy 2050” of the group complies with the contents of the technical road map in the cement field on the “transition finance” published by METI in March 2022. In addition, as the above SPTs is the interim goal of our group companies’ “Carbon Neutral Strategy 2050,” it is considered an ambitious target for the realization of the Paris Agreement.

<Initiatives towards 2030 and 2050> (republishing)

Target for 2030

Domestic and overseas group targets (compared to 2000)
2030 Interim Target*: Reduce CO₂ emissions intensity by 20% or more throughout the supply chain*¹

* Reduction of CO₂ emissions (domestic): 40% or more compared to 2000

- 1. Develop and introduce technologies to pursue carbon neutrality**
 - Maximum use of existing technologies (energy conservation, low-CO₂ energy and cement)*²
 - Completion of innovative technology development (CO₂ capture and utilization)
- 2. Investment of 100 billion JPY (approx. 800 million USD) toward carbon neutrality**

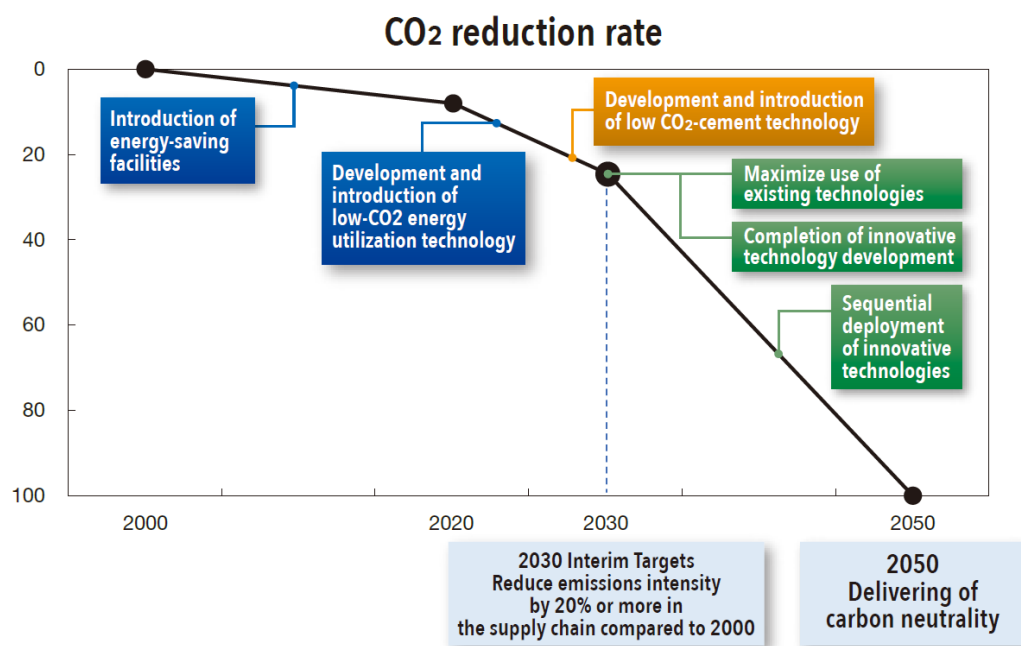
Carbon neutrality by 2050

- 1. Sequential deployment of innovative technologies**
- 2. Achievement of carbon neutrality throughout the supply chain**

*¹ Supply chain: A series of processes involving cement as a commodity, such as raw cement material procurement, production, distribution, use of concrete, and recycling (see p. 3), including scopes 1, 2, and 3 (subject to change due to scope expansion, etc.)
*² Low-CO₂ cement: Cement using low-CO₂ clinker, blended cement, cement using carbonation process, and the like

(Source: Taiheiyo Cement Group, “Carbon Neutral Strategy 2050”)

<Scenario for Delivering Carbon Neutrality> (republishing)



(Source: Taiheiyo Cement Report 2022)

3.4 Principle 3: Loan Characteristics (economic conditions)

- In this TLL, financial and structural characteristics will change according to the achievement status of SPTs. For every finance practice, details including requirements will be disclosed in the contract documents, etc., of each loan.
- If an unanticipated incident occurred (a significant change in the system including rules, etc., occurrence of an abnormal phenomenon, etc.) due to an unexpected situation at the time of the procurement of this TLL, which could have a critical impact on the measuring method and coverage of KPI, settings of SPTs and preconditions, details of changes will be disclosed in the contract documents, etc., of each loan.
- If there is a critical change in the settings of SPTs, the company will discuss with related parties on setting SPTs with the same or above degree of ambition compared to the existing assessment standards based on the changes and obtain an assessment by a third party assessment agency as needed.

3.5 Principle 4: Reporting

- The company will annually publish the progress status of SPTs comprising KPT on the website or in the integrated report, etc., or disclose information to the lender. More specifically, we will disclose the progress status of the CO₂ reduction plan (the CO₂

emissions intensity in the supply chain related to cement production, the amount of domestic CO₂ emissions, etc.).

3.6 Principle 5: Verification

- As the progress status of SPTs comprising KPT, the company will continue to receive annual third-party guarantees regarding the progress status of CO₂ reduction plan (the CO₂ emissions intensity in the supply chain related to cement production, the amount of domestic CO₂ emissions, etc.). The company will annually publish information on verification on the website or in the integrated report, etc., or disclose information to the lender.