TAIHEIYO CEMENT

NEWS LETTER

March 30, 2020

Specific measures formulated for our long-term vision of greenhouse gas emissions reduction toward 2050

Taiheiyo Cement Corporation ("Taiheiyo Cement") has formulated specific measures for its long-term vision of greenhouse gas emissions reduction with the goal of achieving an 80% reduction by 2050.

Further to the announcement of the long-term vision framework in July 2019, Taiheiyo Cement has formulated specific measures for its long-term vision of greenhouse gas (GHG) emissions reduction toward 2050. The details of the measures are shown in the Attachment.

Our long-term vision consists of **reducing specific net CO_2 emissions in cement production** and contributing to **avoided CO_2 emissions through the value chain of cement and cement-related products**.

In order to achieve the goal of an 80% reduction in CO_2 emissions by 2050, we need to develop innovative technologies as well as to advance the application and development of existing technologies. There are also tough issues beyond the technical aspects, such as social acceptance and sharing of financial burden. Looking to our growth and new societal changes in the future, our efforts will focus on **the long-term vision** positioned as **the goal to be achieved by the whole Taiheiyo Cement Group**.

Summary of the Long-term Vision (See the attached files for the details.)

1. Reduced net CO_2 emissions intensity[*1] in cement production

(1) Long-term goal: 80%[*2] reduction by 2050

(2) Scenarios for the reduction:
The following three reduction scenarios have been developed based on the technical considerations and possibilities for practical applications.

Scenario 1:
Application--maximum application of existing technologies
⇨**15%[*2] or more reduction by 2050**

Specific measures:

- Introduction of energy-efficient equipment
- Increased use of alternative energy sources
- Design of low-CO_2 cement within the current standards

Scenario 2:
Advance--introduction of new technologies currently under development, in addition to scenario 1 (Application) measures
⇨**30%[*2] or more reduction by 2050**

Specific measures:

- Utilization of low-carbon energy sources
- Increased use of alternative energy sources with the introduction of new technologies
- Design and development of new low-CO_2 cements with associated revision of the standards

Scenario 3:
Innovation--introduction of innovative technologies that are expected to be developed, in addition to scenario 1 and 2 (Application and Advance) measures
⇨**80%[*2] reduction by 2050**

Specific measures:

- Utilization of energy sources manufactured from captured CO_2
- Design and development of low-carbon cements utilizing new materials
- CO_2 capture, utilization and storage applicable for cement production

2. Avoided CO_2 emissions through the value chain of cement and cement-related products[*3]

⇨ **avoided emissions equivalent to 20%[*2] of CO_2 emissions by 2050**

*1 Specific net CO_2 emissions: CO_2 emissions intensity per ton of cement (kg-CO_2/t-cement), excluding CO_2 emissions from alternative energy sources.

*2 Specific net CO_2 emissions related to cement production by Taiheiyo Cement Group in 2000 is taken as 100%.

*3 As determined by the “Protocol for Accounting and Reporting of Avoided GHG Emissions through the Value Chain of Cement and Cement-based Products” formulated by Taiheiyo Cement in 2019.