ZERO30 Roadmap 2023

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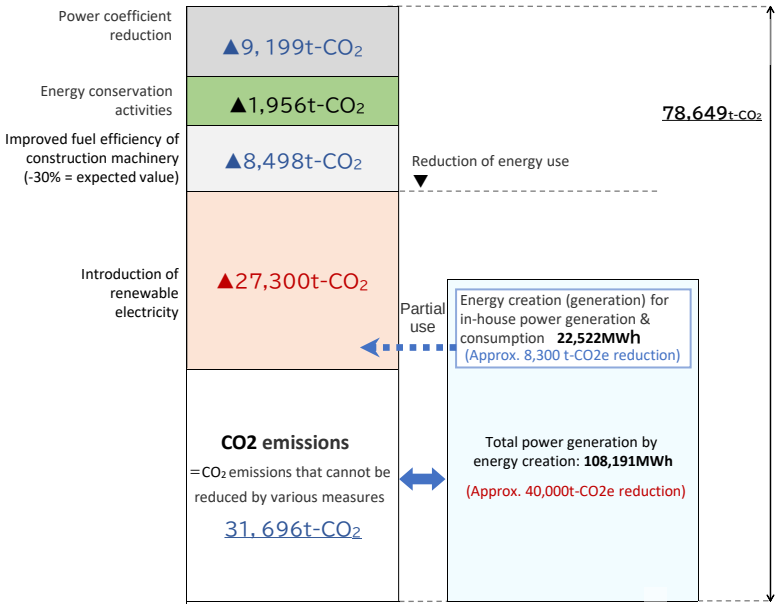
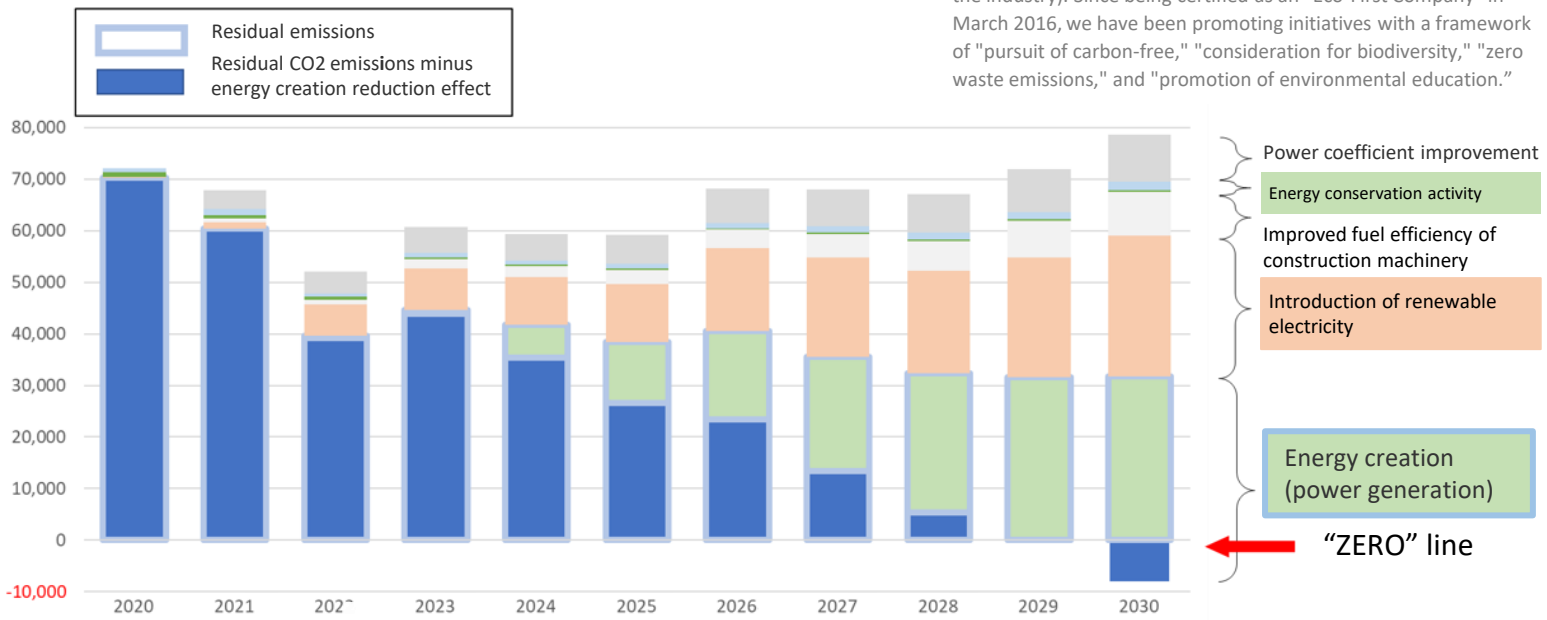
When we renewed our "Eco-First Commitment "* in June 2019, we considered "decarbonization" as an important management issue and have been promoting activities since 2021 by establishing a roadmap, a pathway of specific activities of CO2 emissions reduction by the year 2030. This roadmap was recently renewed as the "ZERO30 Roadmap 2023," which covers CO2 emissions from all of our business activities, now including Scope 3 targets. Aiming to acquire SBT 1.5°C certification, which is a substantial international standard, more ambitious levels are set for CO2 emissions reduction in both Scope 1+2 and Scope 3.

In addition to the CO2 reduction plan, we are sequentially working on power generation (energy creation) by our renewable energy business to contribute to the formation of a decarbonized society. We plan to offer green energy that exceeds our Scopes 1 and 2 residual emissions to society, with the goal of achieving zero "residual emissions minus energy creation reduction effect" as early as possible by 2030.

■ CO2 emissions and power generation by energy creation in 2030



■ Vision for “ZERO“ based on residual CO2 emissions and energy creation reduction effect



*Eco-First Commitment: The Eco-First program is a system under which the Minister of the Environment certifies a company as being "advanced, unique, and industry-leading in its business activities" in the environment field (an environmentally advanced company in the industry). Since being certified as an "Eco-First Company" in March 2016, we have been promoting initiatives with a framework of "pursuit of carbon-free," "consideration for biodiversity," "zero waste emissions," and "promotion of environmental education.”

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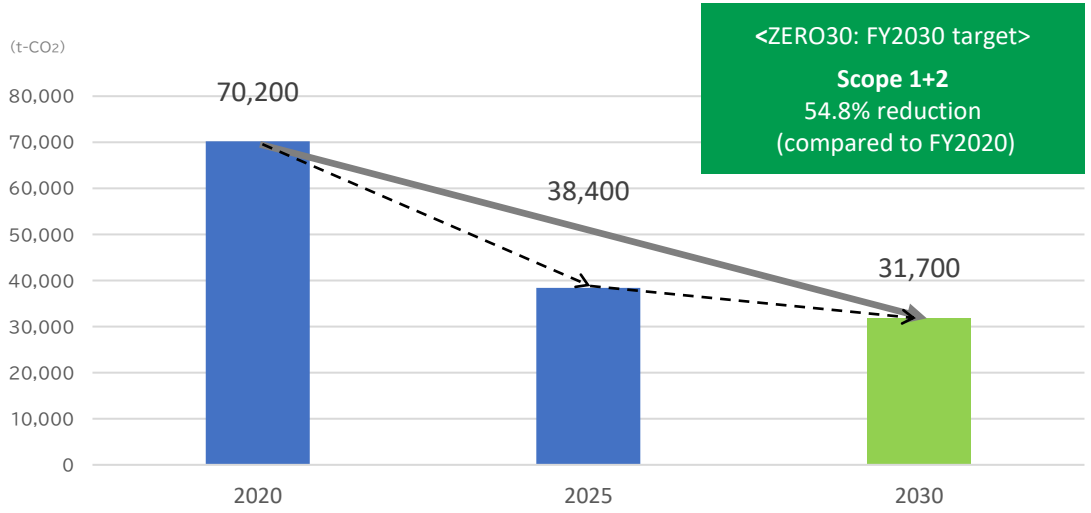
Scope 1+2 reduction plan



CO2 emissions reduction

●Energy conservation (Scope 1)

FY2030 target: 1,956 t-CO_2

FY2025 target: 1,221 t-CO_2

FY2020 results: 1,718 t-CO_2

●Introduction of renewable electricity (Scope 2)

FY2030 target: Introduction rate 77%

FY2025 target: Introduction rate 35%

FY2020 results: Introduction rate 0.4%

Reduction effect

●Power generation from renewable energy projects

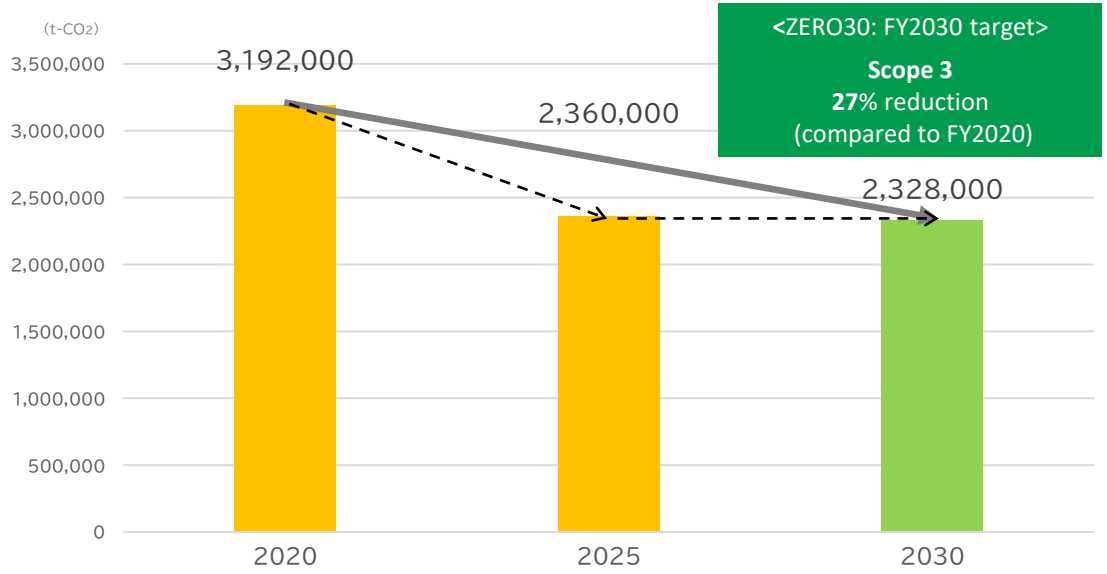
FY2030 target: 108,000 MWh
(▲40,000 t-CO2e)

FY2025 target: 28,500 MWh
(▲11,800 t-CO2e)

FY2020 target: 0 MWh

Contribute to the formation of a decarbonized society by energy creation that exceeds residual emissions.

Scope 3 (Category 11) reduction plan



●Promotion of ZEB design (design BEI = improvement in primary energy consumption rate)

FY2030 target: offices: 0.25, residence: 0.7, hospital: 0.8, other uses: 0.5 on average in our designed properties.

*In principle, Design for Environment at the ZEB Ready level is promoted.

<Category 11>

The use phase of a building consumes the most energy during its life cycle. In our Scopes 1, 2 and 3 supply chain emissions, "CO2 emissions associated with energy use during the operational phase of a completed and delivered building (Scope 3 Category 11)" accounts for the largest share.

We are promoting ZEB as a means of reducing energy consumption during the operation of buildings. In order to provide society with many valuable buildings, we will continue to actively work on energy conservation of buildings and development of technologies using renewable energy.

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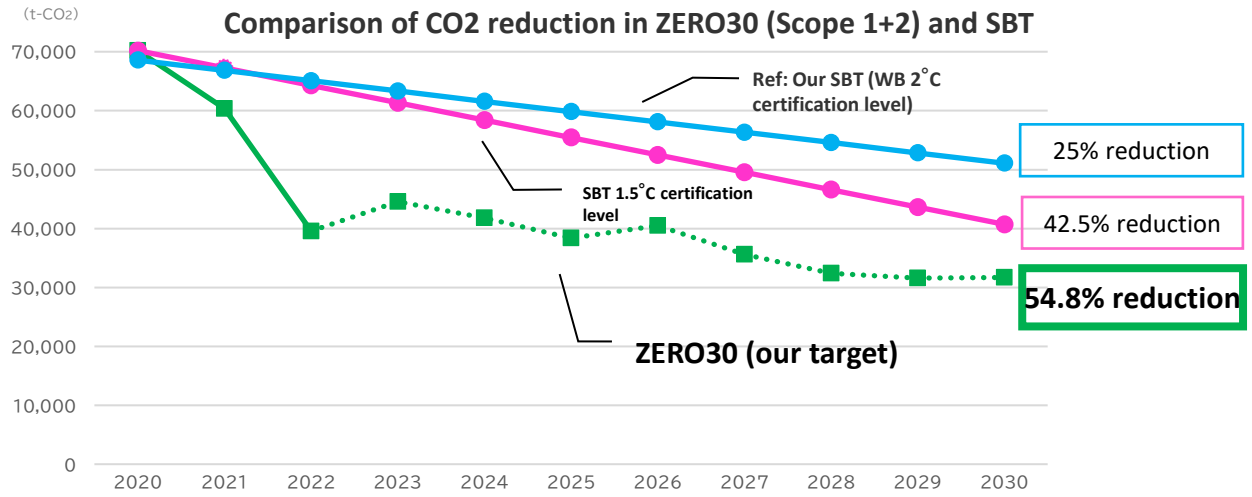
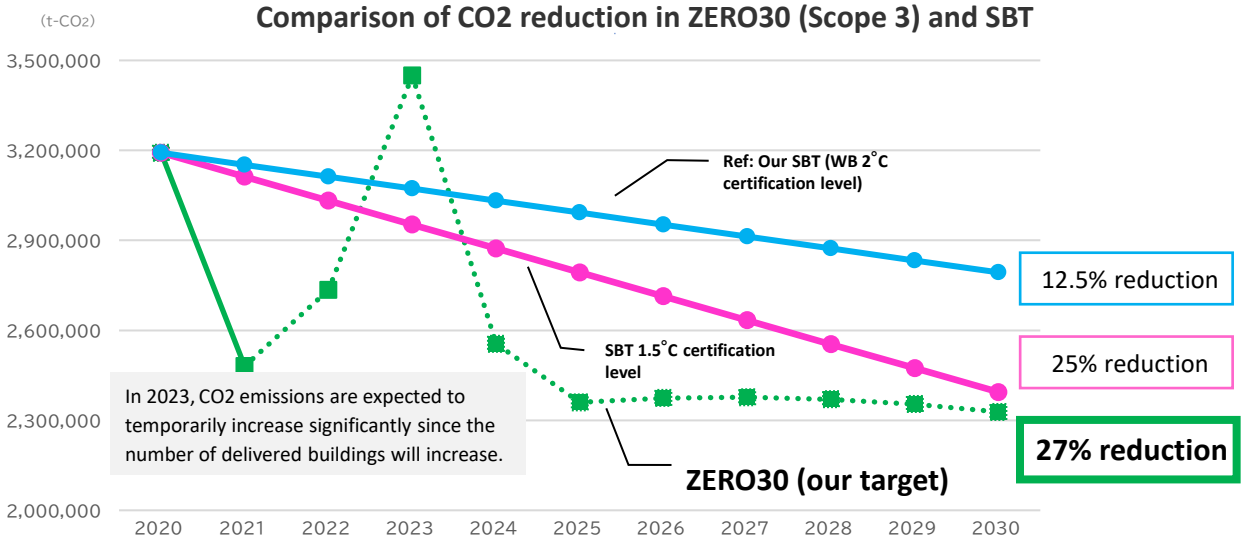
Comparison of ZERO30 (Scope 1+2, Scope 3) and SBT*





The graphs show Scope 1+2 and Scope 3 CO2 emissions reduction according to the ZERO30 Roadmap 2023, respectively, which shows more ambitious targets than the SBTWB 2°C, for which we were certified in June 2022, and even SBT 1.5°C levels.

For Scope 1+2, we have set a CO2 emission reduction target of 54.8% from the 2020 level (upper graph), assuming aggressive energy-saving activities and conversion of electricity to renewable energy.

Scope 3 targets Category 11 "CO2 emissions associated with energy use during the operational phase of a completed and delivered building," which accounts for more than 75% of total Scope 1, 2 and 3. In design-build projects, ZEB design is being promoted, with the goal of a 27% reduction from the 2020 level (lower graph).

From 2024 onwards, we will achieve both business growth and CO2 reduction by constructing buildings with higher energy-saving performance, such as ZEB.

Based on this roadmap, we aim to obtain SBT 1.5°C certification by the end of 2024.

To achieve these ambitious goals in the future, we strive to further reduce CO2 emissions and meet the growing needs for decarbonization.

*SBT: Science Based Targets set to reduce greenhouse gas emissions aiming to achieve the goals of the Paris Agreement. SBTi, an international initiative, promotes activities to request companies to set SBTs and builds a certification system.

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CO2 reduction activity targets and energy creation targets for ZERO30 Scopes 1 and 2

*FY2022 results show approximate figures.

Main measure		FY2021 result	FY2022 result	FY2023 target	FY2025 target	FY2028 target	FY2030 target
Introduction of renewable electricity	CO2 emissions reduction by renewable energy	▲1,282t-CO_2	▲6,082t-CO_2	▲8,060t-CO_2	▲11,300t-CO_2	▲19,890t-CO_2	▲27,300t-CO_2
	Renewable electricity introduction rate (domestic civil engineering business)	4%	27%	27%	42%	65%	80%
	Renewable electricity introduction rate (domestic offices, etc. other than construction activities)	17%	55%	66%	89%	100%	100%
	Renewable electricity introduction rate (international business)	0%	0%	0%	8%	40%	60%
	Renewable electricity introduction rate (asset value-added business)	0%	3%	23%	68%	76%	100%
	Renewable electricity introduction rate (Group companies) *Including in-house power generation	2%	7%	12%	12%	79%	100%
On-site environmental measures (energy conservation)	CO2 emissions reduction by energy conservation	▲1,770t-CO_2	▲1,227t-CO_2	▲1,190t-CO_2	▲1,220t-CO_2	▲1,630t-CO_2	▲1,950t-CO_2
	Diesel oil combustion accelerator Introduction rate	59.04%	48.59%	60%	75%	90%	100%
	Use of biodiesel fuel	64,000 liters	36,000 liters	—	—	—	—
	Number of sites where N-TEMS is installed *Nishimatsu Tunnel Energy Management System	5 sites	7 sites	4 sites	4 sites	5 sites	5 sites
Amount of energy created (renewable energy generation)		Approx. 0k MWh	Approx. 0.8k MWh	Approx. 1.7k MWh	Approx. 29k MWh	Approx. 69k MWh	Approx. 108k MWh