

# NTN's Goal of a Carbon-neutral Society

## Carbon neutrality

### Response to climate change

The NTN Group is promoting carbon neutrality activities in response to climate change and has set the targets for reducing Scope 1 and 2 emissions by fiscal year 2030 and fiscal year 2035. To that end, we are promoting CO<sub>2</sub> emission reductions in our business activities. To advance CO<sub>2</sub> reduction in the supply chain (Scope 3), we established a new working group in fiscal year 2024 to first formulate and promote reduction measures domestically. We will strengthen collaboration with suppliers to promote activities toward "Achieving carbon neutrality by fiscal year 2050."

\*Note: The Company calculates and reports only energy-derived carbon dioxide (CO<sub>2</sub>) emissions among GHG emissions.

### NTN's carbon neutrality targets

CO<sub>2</sub> emission reduction targets (Scope 1, 2)

- 50% reduction by FY2030 (compared to FY2018)
- Achieve carbon neutrality by FY2035

CO<sub>2</sub> emission reduction targets (Scope 3)

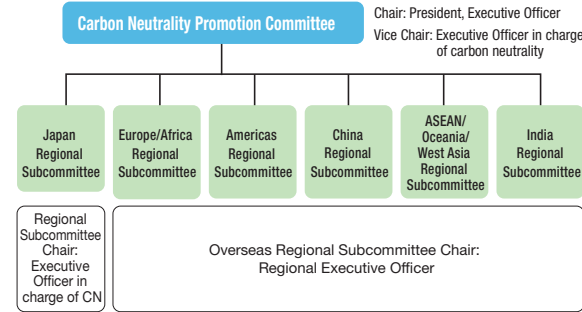
- Achieve carbon neutrality by FY2050

### Governance structure for promoting carbon neutrality initiatives

To promote carbon neutrality activities throughout the NTN Group, we established the Carbon Neutrality Strategy Promotion Department in April 2023, and in July of the same year, we established a company-wide Carbon Neutrality Promotion Committee as well as regional subcommittees to create a global promotion structure. The Committee Chair is the Representative Executive Officer, and by holding committee meetings twice a year, connecting headquarters and locations worldwide online, we share best practices, deploy them globally, and promote mutual inspiration.

The regional subcommittees are chaired by the Executive Officers responsible for each region, and by holding regional subcommittee meetings four times a year, they examine measures and initiatives suited to the actual conditions of each region and report the results to the Carbon Neutrality Promotion Committee.

### Carbon neutrality promotion system



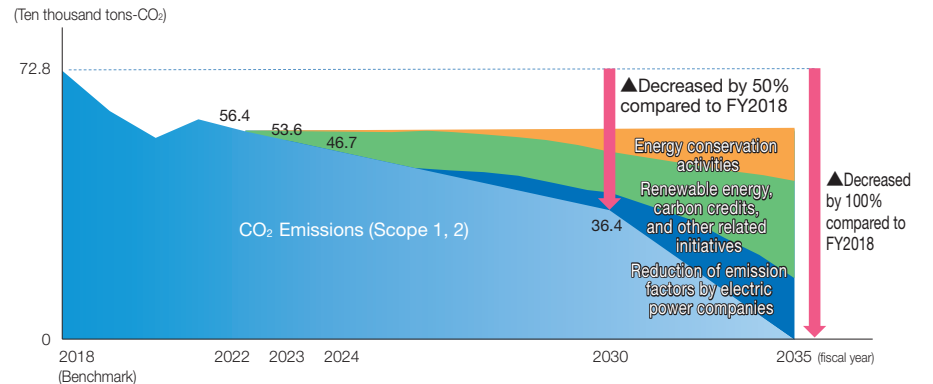
### Carbon neutrality promotion committee



### Progress management based on the carbon neutrality roadmap

The NTN Group has created carbon neutrality roadmaps as indicators for effectively advancing carbon neutrality activities. Based on these roadmaps, we closely follow the status of activities at each stage and manage progress toward our targets. The roadmaps are created by each region and each business site, showing specific measures and timelines in detail, and we are promoting initiatives toward achieving carbon neutrality with the entire company working as one.

### NTN Global CO<sub>2</sub> emission reduction roadmap (By reduction activity)

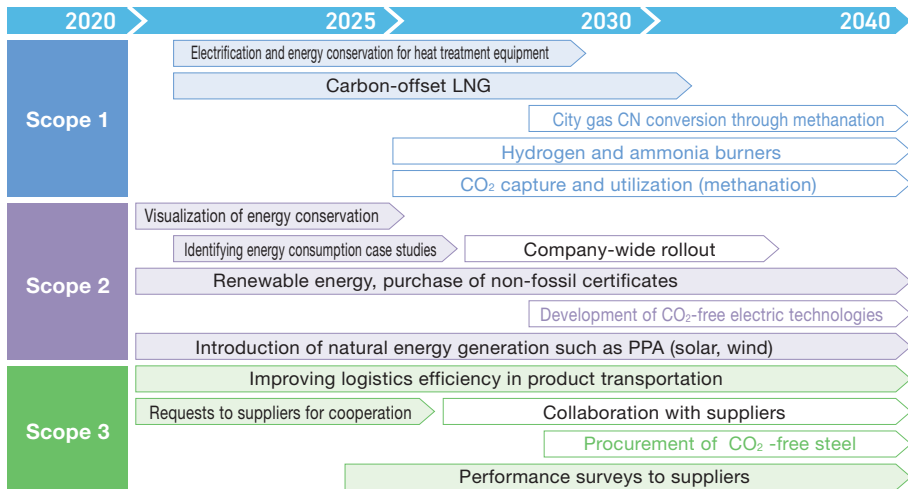


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## Reduction measures for each scope

This shows the overall picture of initiatives in each scope. We are promoting CO<sub>2</sub> emission reduction improvements within the company, such as electrification, energy conservation, and the introduction of renewable energy generation, while also working with external partners to accelerate these initiatives.

### Promoting in-house initiatives while accelerating activities through collaboration with external parties



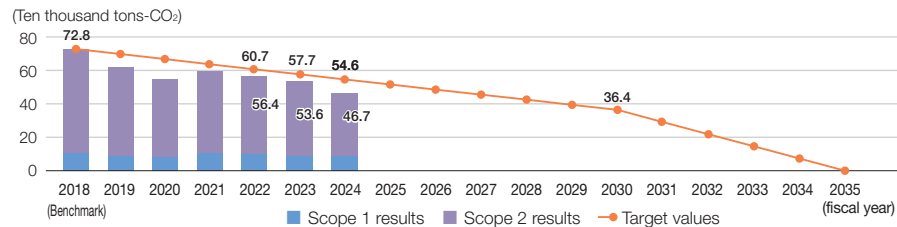
\*Shaded items are in progress, and items shown in colored fonts are initiatives by external organizations

## CO<sub>2</sub> emission results

The fiscal year 2024 results were Scope 1: 82,669 tons (domestic: 45,596 tons, overseas: 37,073 tons), Scope 2: 384,158 tons (domestic: 180,974 tons, overseas: 203,184 tons).

For Scope 2, domestic business sites are calculated using market-based emission factors, while overseas business sites are calculated using location-based emission factors.

### CO<sub>2</sub> Emissions (Scope 1, Scope 2)

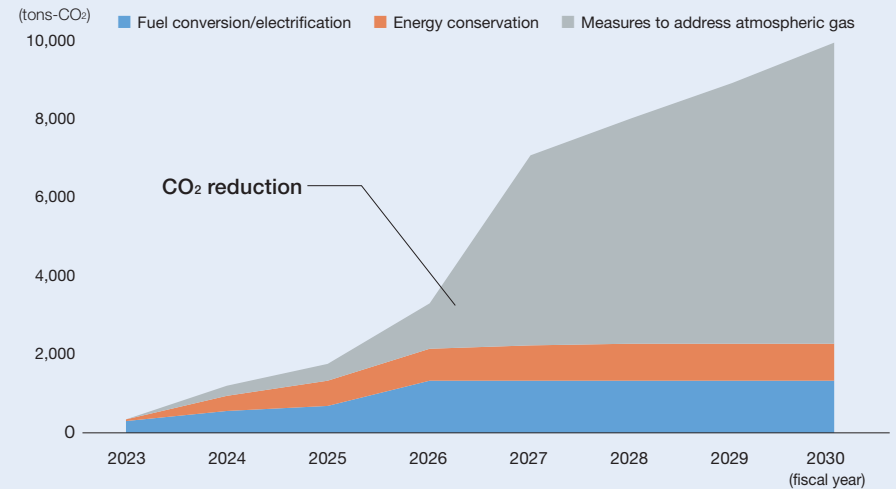


### Scope 1

## Energy-saving measures for heat treatment equipment

To reduce CO<sub>2</sub> emissions from heat treatment facilities, we are promoting three measures: fuel conversion and electrification, energy conservation, and atmospheric gas control. All newly introduced heat treatment furnaces since 2017 are electric furnaces. Additionally, high-efficiency insulation materials have been introduced to minimize heat loss from the outer walls of the heat treatment furnaces, thereby reducing fuel consumption. Furthermore, we are reducing CO<sub>2</sub> emissions through atmospheric gas countermeasures in furnaces dedicated to ordinary quenching.

### Overall picture of initiatives for heat treatment equipment (Domestic)



In fiscal year 2024, we reduced 676 tons of CO<sub>2</sub> through energy conservation measures for heat treatment equipment. This corresponds to approximately 14% of the domestic Scope 1 reduction amount for fiscal year 2024.

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## Scope 2

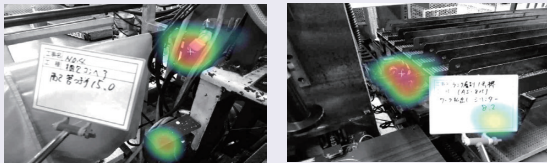
### Energy reduction at production sites

To reduce CO<sub>2</sub> emissions within our company, we are advancing waste visualization and energy use reduction.

The results of energy-saving measures at domestic business sites are compiled into a database, and best practices are also deployed and shared with overseas business sites. Going forward, we will enable overseas business sites to also register in the database, promoting bidirectional information sharing.

Additionally, since fiscal year 2023, we have introduced internal carbon pricing as an investment decision indicator for new capital investments, promoting low-carbon management.

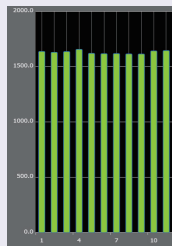
### Energy reduction measures



CO<sub>2</sub> reduction amount  
17tons-CO<sub>2</sub>/year  
(Implementation targets:  
275 locations)

A case where diagnostic equipment capable of visually detecting air leak locations was used to identify and repair the affected areas (Iwata)

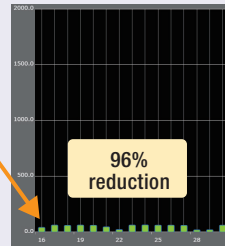
Air consumption before replacement



Booster tank before replacement



Air consumption after replacement



Booster tank after replacement



CO<sub>2</sub> eduction amount  
27tons-CO<sub>2</sub>/year

Example of installing air flow meters to visualize air usage by process, which revealed air leaks in pressurization tanks and enabled countermeasures to be taken (Kuwana)

## Scope 3

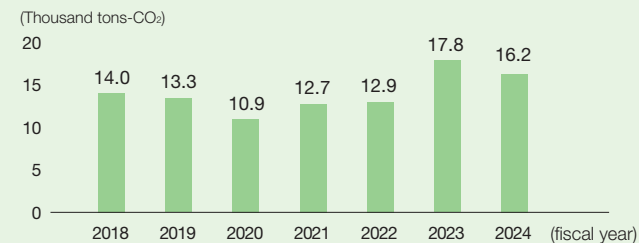
### Initiatives to improve calculation accuracy

The NTN Group aims to achieve carbon neutrality, including supply chain emissions (Scope 3), by fiscal year 2050. To promote CO<sub>2</sub> reduction across the supply chain, we have newly established a working group responsible for planning and implementing reduction measures, and are actively advancing related initiatives. Among all Scope 3 categories, Category 1: "Purchased goods and services" accounts for the largest share of emissions. The majority of these emissions stem from the procurement of raw materials such as steel, and semi-finished products including forgings and machined components. Therefore, we first conducted an emission survey targeting steel manufacturers, taking into account differences in production methods. Moving forward, we will carry out similar surveys for suppliers of semi-finished products, revise the emission factors used, and globally promote activities aimed at accurately assessing and reducing emissions based on actual conditions.

### Specific initiatives for collaboration with suppliers and logistics optimization

- **Procurement of CO<sub>2</sub>-free steel materials**
  - Gathering information and promoting reviews
- **Requesting suppliers to work toward carbon neutrality**
  - Sharing the background behind our efforts to achieve carbon neutrality as well as our targets
  - Introducing examples of energy conservation practices
  - Planned regular surveys on CO<sub>2</sub> emissions data and the status of energy conservation initiatives
- **Enhancing efficiency during product transportation**
  - Reducing transportation distances by optimizing distribution routes
  - Enhancing loading efficiency by expanding the use of modular packaging
  - Reducing the number of containers by increasing loading ratio on export containers
  - Reuse and recycling (repair) of wooden pallets

### CO<sub>2</sub> emissions in logistics (Domestic)



# NTN's Goal of a Carbon-neutral Society

## ■ Topics; Bearings made with light and wind

Bearings made with light and wind is a product concept proposed in “A Proposal of Technology and Commodities which NTN Should Introduce to Preserve the Environment ,” which won the President Award in the 88th Anniversary Prize Essay contest with the theme of “The Environment” that was internally solicited in 2006. The concept states that “the electricity used in manufacturing these bearings will be supplied by natural energy such as wind power generation and solar power generation.”

At that time, although it was a period when international interest in climate change issues were beginning to rise, with the Kyoto Protocol adopted in 1997 taking effect in 2005 and the movie “An Inconvenient Truth” being released in 2006, social awareness and demands for carbon neutrality were far lower than today. This advanced concept, advocated and evaluated within the company during such an era, has taken the form of our Group’s carbon neutrality targets and continues to flow at the foundation of our activities today.

Specifically, we cover approximately 20% of all electricity purchased by domestic manufacturing sites (with some sites like the Wakayama Works at 100%) through electric companies’ CO<sub>2</sub>-free menus, while actively promoting the introduction of natural energy. In particular, we have begun direct purchasing of environmental value from wind power generation operators who have adopted our bearings and condition monitoring systems, bringing us one step closer to bearings made with light and wind.

### Solar power

We are expanding on-site solar power generation within our own premises at domestic and overseas business sites, which also contributes to reducing electricity costs.

In Japan, we utilize PPA (third-party ownership model), and in fiscal year 2024, we installed a total of approximately 3,400kW of solar panels on factory rooftops at Wakayama Works, Kuwana Works, Iwata Works, and Engineering Plastics Works.

Overseas, we select installation methods according to the circumstances of each country, and in fiscal year 2024, we introduced approximately 7,200kW of equipment in Thailand using a self-ownership model utilizing tax incentives.

Going forward, we will also consider utilizing off-site PPA while monitoring trends in new technologies such as perovskite solar cells.

#### ■ On-site solar PPA (Wakayama Works)



Wakayama Works (October 2024~)

#### ■ Self-investment utilizing tax incentives



Solar panel system installation ceremony at Thai manufacturing site (August 2024)

### Wind power

On May 7, 2025, our company signed its first wind power virtual PPA (a contract to directly purchase only the environmental value based on the amount of electricity generated) with Cosmo Eco Power Co., Ltd.

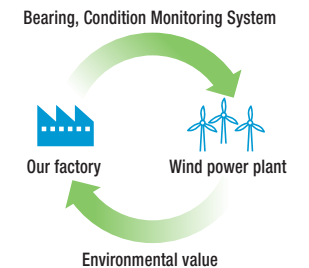
Through this PPA, we will receive approximately 10 million kWh worth of environmental value (non-fossil certificates) annually over the next 16 years, which is expected to reduce CO<sub>2</sub> emissions by approximately 4,200 tons per year.

The wind turbines at the Chuki Wind Farm, which are covered by this agreement, are equipped with our bearings as well as our CMS (Condition Monitoring System) “Wind Doctor,” which is used for monitoring operational status and conducting preventive inspections. The environmental value generated at this site will be utilized in the manufacturing and service operations of these products, forming a cycle in which the benefits are ultimately delivered to our customers.

#### ■ Wind virtual PPA (Chuki Wind Farm)



#### ■ Wind value cycle



Please see the NTN Group sustainability website for information aligned with the TCFD (Task Force on Climate-related Financial Disclosures).

 <https://www.ntnglobal.com/en/csr/tcfd.html>



Please see the NTN Group sustainability website for specific initiatives related to our response to climate change.

 <https://www.ntnglobal.com/en/csr/idea/carbon-neutrality.html>