Carbon Neutrality

Risks and opportunities

We have introduced the scenario analysis recommended by the TCFD (Task Force on Climate-related Financial Disclosures), identified risks and opportunities, and are working to address them. Details of our response to the TCFD's recommended disclosure items are posted on our website.

Risk/Opportunity		Response
Risks	Increase in operating costs due to the introduction of a carbon tax	Promotion of thorough energy-saving activities Expansion of introduction of renewable energy Substitution of greenhouse gases
Opportunities	Cost reduction by reducing greenhouse gases (carbon tax, electricity charges, etc.)	
Risks	Termination of business with customers due to not aiming for decarbonization	Declaration of virtually zero CO ₂ emissions goal for 2050 Announcement of Carbon-neutral Strategy 2030
Opportunities	Stable funding through information disclosure regarding carbon neutral measures	
Risks	Increase in material costs due to material changes aimed at lower carbonization	Increase of orders through development of low CO ₂ products Promotion of alternatives to fossil-resource plastics
Opportunities	Development and expansion of use of lower CO ₂ materials	
Risks	Sales decline due to plant suspension and supply chain disruption due to rise in average temperature	Formulation of Business Continuity Plan (BCP)
Risks	Increase in air conditioning costs due to rise in average temperature	·Update of air-conditioning equipment to top-runner equipment
Risks	Water-supply shortage due to change in precipitation	Water reuse in the manufacturing process

Expanding the introduction of renewable energy

We are expanding the introduction of solar power generation throughout the Group. In FY 2023, we introduced 3.600 kW of solar power generation at our subsidiaries in Japan and at five overseas locations. We are also promoting the introduction of off-site PPA* to procure new and additional renewable energy sources, and in addition to two sites in Nagano and Osaka prefectures, a new solar power plant has been constructed in Yatomi City, Aichi Prefecture, and is now in operation. As a result, the renewable energy rate in FY 2023 increased to 14.1%

*An agreement whereby the operator installs a solar power plant outside the customer's premises and the customer purchases the electricity



(%) Renewable energy usage rate Plan Target value

Renewable energy usage rate

Joint procurement of renewable energy with suppliers

At the off-site PPA power plant in Yatomi City, Aichi Prefecture, which began generating power in FY 2023, we have concluded an agreement with 12 suppliers who are members of Tokai Rika Kyouryoku-kai and Chubu Electric Power Miraiz Co., Ltd.

We will jointly procure renewable energy-derived surplus electricity from a solar power plant installed on the vast roof space of the distribution warehouse (panel output: 5,770 kW). By doing so, our supply chain will work together to promote decarbonization and contribute to the introduction of new renewable energy.



Use of carbon offset city gas

Our head office and plant are supplied with carbon offset city gas (formerly known as carbon neutral city gas) by Toho Gas Co. This city gas utilizes carbon offset LNG (liquefied natural gas), which is CO₂ emitted in the process from mining to combustion of natural gas, and is offset with CO₂ credits (carbon offset). The amount of city gas used in FY 2023 was 1,156,548 m³ (3,022 tons offset), all of which was certified by SOCOTEC Certification Japan K.K. as carbon offset city gas.



Reduction of energy use

Aiming to minimize energy use to achieve carbon neutrality, we have formulated energy conservation guidelines that outline our approach to adopting high-efficiency equipment, steam-less, heat insulation/shielding, non-operation stoppages, airless, and other energy conservation methods. By determining equipment specifications based on these guidelines, we ensure that energy conservation is incorporated from the stage of new equipment installation. We have made a list of examples of past projects and shared examples with partner companies so that all employees can see the progress of each department, thereby ensuring that the horizontal exhibitions are completed.

We are also proceeding with the introduction of an energy visualization system that constantly monitors the energy usage of each production facility and line. Managers at each production line monitor energy usage in real time. This allows us to respond immediately when abnormal usage occurs, and to identify waste through daily usage analysis.

In the future, we will link this system with a production management system to perceive the amount of energy used per product. By doing so, we plan to improve the accuracy of LCA.

Developed Japan's first in-mold coating for small parts

In partnership with Seikoh Giken Co., Ltd., we have developed Japan's first in-mold coating technology for small parts.

The molding, painting, and drying processes, which were previously performed separately, can now be performed consistently inside the mold using an injection molding machine, thereby eliminating both the painting and drying processes, which generate a high volume of CO₂.

By introducing this technology, CO₂ emissions can be reduced by approximately 60% while maintaining the same appearance as conventionally manufactured products. We are moving forward with the goal of commercialization in 2025.

Reduction of greenhouse gases

As we are using SF6* for the shielding gas to prevent melted magne burning when exposed to air in the magnesium casting process, we are ing with a changeover to a substitute gas with a smaller greenhouse domestic bases have completed the changeover, and we plan for bases to have completed it in 2030.

*SF6 has high global warming potential, 23,500 times greater than that of CO2, our standard, so it has been specified as one of the targets of emission control

Internal Carbon Pricing System

We are introducing Internal Carbon Pricing (ICP) to promote capital investment that can contribute to the reduction of CO₂ emissions. By setting an in-house carbon price of 16,000 yen/t-CO₂ and evaluating the economic effect of CO₂ reduction as an investment effect, we are promoting carbon-neutral strategy investment. The introduction of ICP makes it possible to visualize the economic impact of CO2 emissions, leading to appropriate investment decisions. It is also applied to risk and opportunity scenario analysis to provide a quantitative assessment of the impact of climate change on the company, its countermeasures, and strategies.

Development of low-CO₂ materials

We have developed a new material, BAMBOO+, which is a composite of thermoplastic and bamboo, which grows quickly and can be used sustainably It also greatly reduces the use of limited fossil resources. More details are available on the special feature page.



Energy-related CO₂ emissions (Global consolidated)



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