Disclosure of Responses to Climate Change Aligned with the TCFD Recommendations

Stanley Electric Co., Ltd.

October 2023

Stanley Group’s positioning of climate change responses

The Stanley Group is actively engaged in environmental protection to ensure that the abundant blessings of the earth and its ecosystem are passed on to the next generation in a healthy condition. We have identified the “Creation of new value in harmony with the environment” as one of our material issues in pursuing sustainable growth. In particular, we perceive decarbonization initiatives as an urgent task. In FY 2021, we set the target of “reducing CO_2 emissions from our business activities by 50% up to FY 2030 compared to FY 2019 and achieving carbon neutrality up to FY 2050.”

Our goal is to achieve carbon neutrality by minimizing the environmental impact at every stage of our product's lifecycle. To accomplish this, we are utilizing our expertise in LED and optical technology, which are key strengths of the Stanley Group. We aim to create environmental value and improve our profits through in-house manufacturing. By combining our competence in cost-reduction activities with measures to reduce CO_2 emissions, we aim to achieve these goals without relying heavily on renewable energy.

The Stanley Group recognizes the importance of disclosing climate-related financial information and has endorsed the Task Force on Climate-related Financial Disclosures (TCFD) recommendations in June 2023. We have also conducted climate scenario analysis to identify risks and opportunities and estimated their impact on business and finances while considering countermeasures. Our strength in cost reduction will help us achieve carbon neutrality, and we will implement this as a part of our strategy.

Therefore, based on the framework of the TCFD recommendations, we will report on the impact of climate change-related risks and opportunities on the Stanley Group's business activities and profits, etc.

Governance

To promote sustainability at the Stanley Group, management meetings are held through main committees, meeting bodies, and other relevant departments to deliberate and approve basic policies and measures for initiatives. The Board of Directors is also informed of the details of these initiatives as necessary. The Board of Directors comprises a diverse group of members, including those with extensive knowledge and experience in sustainability.

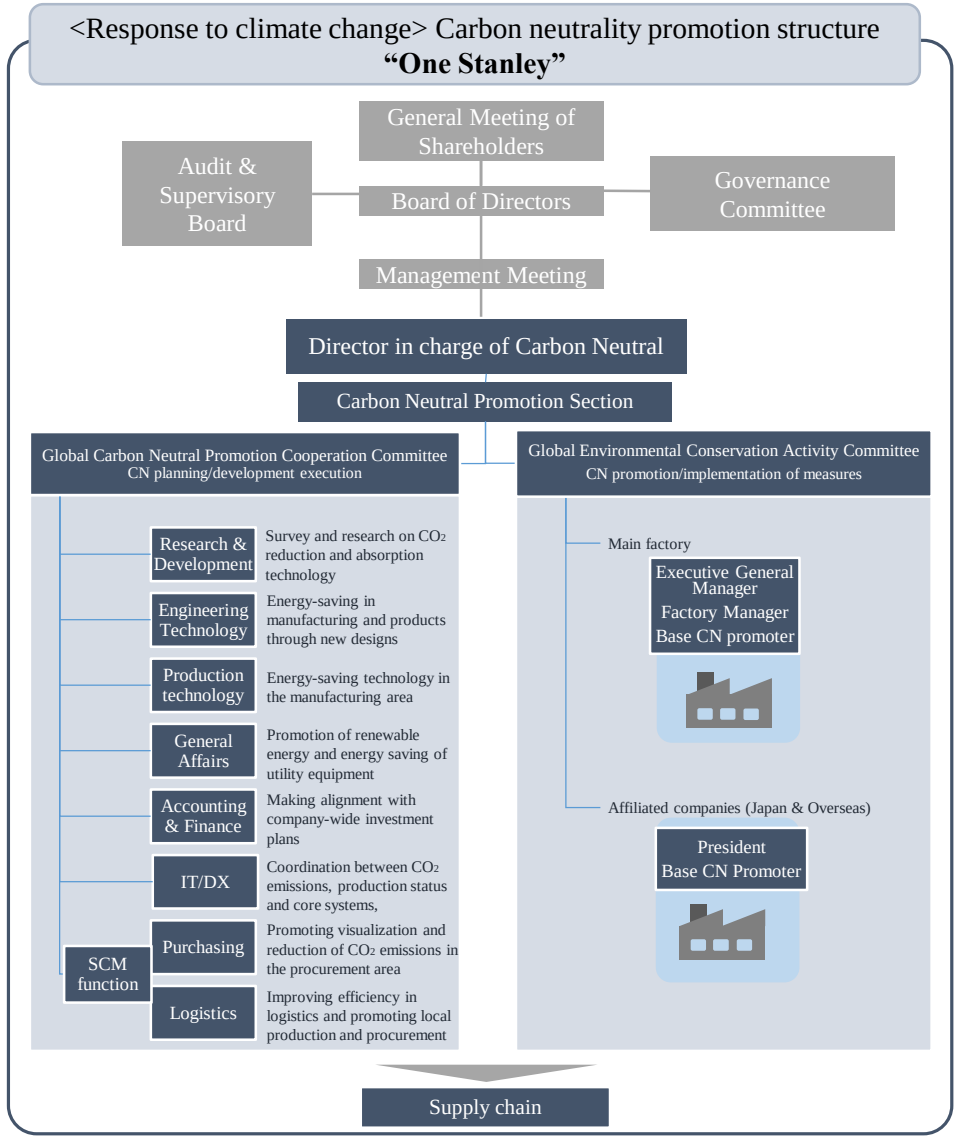
*For Board of Directors organization and skills, please refer to Integrated Report 2023, Pages 61 and 62.

To address climate change issues, the Stanley Group has established two committees, the Global Carbon Neutral Promotion Cooperation Committee (hereinafter referred to as CN Promotion Committee) and the Global Environmental Conservation Activity Committee, directly under the management meeting body. The aim of these committees is to achieve a competitive advantage by promoting and realizing carbon neutrality, which is an important management issue for the group.

The CN Promotion Committee is chaired by the Director in charge of Carbon Neutral and includes executive officers, operating officers, and general managers from various primary functions such as research and development, engineering technology, production, and purchasing. The committee is responsible for managing and evaluating the progress of action plans designed to achieve carbon neutrality, updating strategies that reflect the Stanley Group's CO_2 emissions reduction status and industry/customer trends, and formulating investment plans related to carbon neutrality. The results of monthly regular meetings are reported at the management meeting and reflected in the company-wide strategies.

The Stanley Group operates under the concept of "One Stanley," where all employees work together towards achieving carbon neutrality with urgency. The responsibility of promoting carbon neutrality lies with the executive general managers of the divisions, factory managers, and presidents of affiliated companies at all production bases, while the carbon neutrality (CN) promoters at each base are responsible for implementing measures planned and developed by the CN Promotion Committee. By sharing the ideas and measures unique to each base globally, we create value specific to Stanley and carry out the same activities simultaneously through the Global Environmental Conservation Activity Committee.

Furthermore, to reduce carbon emissions not just within the company but also in the supply chain, the supply chain management (SCM) function, under the direction of the director in charge of purchasing, controls the procurement departments of global bases and works with the Carbon Neutral Promotion Section to carry out optimal procurement, including CO_2 emissions reductions.



Risk Management

At Stanley Group, we define risks as events that have the potential to adversely affect our management and business operations if they were to happen. This includes natural disasters that are caused by climate change. In recent years, natural disasters have occurred at our business locations and supplier locations both in Japan and overseas. This has led to an inherent risk of supply shortages of raw materials and parts, which could negatively impact our business performance and financial condition.

To manage potential risks, the Stanley Group conducts regular meetings of its Risk Management Committee, chaired by a director. The committee formulates and approves “important risks” and “risk scenarios” and then communicates them to the relevant business divisions and departments in charge. They also promote risk analysis and identification and prepare response manuals. If a risk materializes, a “Business Continuity Planning (BCP) Headquarters” will be established by the Risk Management Committee to provide a unified response to the event.

The Risk Management Committee considers the potential risks associated with climate change during its analysis process. If the regular monitoring identifies that the risk is highly urgent or likely to occur, the committee will manage it using the same procedure as other risks.

*For Risk Management, please refer to Integrated Report 2023, Page 29.

Strategy

(1) Scenario analysis process

At Stanley Group, we have selected 16 climate-related risks and opportunities that are aligned with our business strategy and value chain. The diagram below illustrates our process of selecting these risks and opportunities. We evaluated each item from three perspectives: the degree of impact, the possibility or feasibility of occurrence, and occurrence timing (STEP 2). Thereafter, we estimated the financial impact of the items that are likely to occur by FY 2030 and will significantly impact our business and finances (STEP 3).

Additionally, we will consider quantitative analysis for items lacking identifiable parameters to estimate the FY 2030 financial impact and monitor changes in the external environment in a timely manner.

Scenario analysis process

STEP 1	**Selection of climate scenarios**	• Determine the climate scenario and assumed year when calculating the financial impact. [See Strategy (2).]
STEP 2	**Identification of risks and opportunities**	• STEP 2-1 Create a list of risks and opportunities: Create a primary list of risks and opportunities that may occur in the value chain, mainly in the automobile manufacturing industry (16 items). • STEP 2-2 Identify risks and opportunities that can have a significant financial impact and require priority response: Evaluate the risks and opportunities extracted in STEP 2-1 in terms of the degree of financial impact, possibility or feasibility, and occurrence timing to identify the subjects of financial impact estimation. [See Strategy (3).]
STEP 3	**Estimating the financial impact of risks and opportunities**	• For the risks and opportunities identified in STEP 2-2, estimate the impact of risks and opportunities whose financial impact can be quantified. [See Strategy (3).]
STEP 4	**Examining measures to address risks and opportunities**	• For countermeasures, summarize the measures considered by the CN Promotion Committee, etc. [See Strategy (4).]

(2) Selection of climate scenarios (STEP 1)

Among the several climate scenarios assumed by the TCFD recommendations, the Stanley Group has selected two climate scenarios – a 1.5℃ and a 4℃ scenario – to analyze risks and opportunities in FY 2030.

In the 1.5℃ scenario, policies and regulations are strengthened to achieve carbon neutrality, and society as a whole takes proactive measures to combat climate change. On the other hand, in the 4℃ scenario, decarbonization measures are not promoted, and natural disasters become more frequent and severe – an extension of the current situation.

Overview of climate scenarios and expected changes in the external environment

External environment items	1.5℃ scenario	4℃ scenario
Policies and regulations	Strengthening policies for achieving carbon neutrality in FY 2050 (introduction of carbon pricing, renewable energy ratio expansion, energy conservation strengthening, etc.)	Strengthening policies for severe disaster countermeasures (policy support such as regulations and subsidies)
Investment and financial institutions	Expansion of more advanced demands than policies toward carbon neutrality	Although there is pressure to respond to the effects of advancing climate change (deterioration of the natural environment such as deforestation), this has not affected investment and loan decisions.
Society	Changes in values (consumption propensity) due to a decarbonized society	No change from the current situation
Natural environment	Gradual climate change	Increasing severity and frequency of natural disasters, changes in precipitation patterns

Strategy

(3) Identification of risks and opportunities (STEP 2) and estimating the financial impact of risks and opportunities (STEP 3)

We have identified the potential risks and opportunities for the Stanley Group resulting from climate change based on three evaluation criteria: degree of financial impact, probability or feasibility of occurrence, and occurrence timing.

Three evaluation criteria for identifying climate-related risks and opportunities

- Degree of financial impact:
  - "High impact" = There will be a substantial increase in procurement costs, taxes, and additional investment expenses, requiring a review of the company's strategies. The product may not be chosen due to changes in consumer behavior. All these could negatively impact the continuation and survival of the business. Alternatively, this could also present an opportunity to expand our profits, acquire new revenue sources, and transform the business portfolio.
  - "Medium impact" = Although operations will continue, there will be additional costs associated with procurement, taxes, and investments. As a result, it may be necessary to review the company's strategies. Alternatively, this situation can also lead to expanded profits and new opportunities for growth, resulting in a sustainable and stable business.
  - "Low impact" = The risks can be addressed by extending the current strategy.
- Possibility or feasibility of occurrence: Based on scientific discussions and current policies, decisions are made using a risk assessment approach based on the probability of policy implementation and risk occurrence (high, medium, low).
- Occurrence timing: We have divided the strategic plan into short-term (until FY 2025), medium-term (until FY 2030), and long-term (until FY 2050) periods based on the anticipated impact timing and the formulation cycle of the business strategy.

Based on the three evaluation criteria (refer to pages 7 to 11), we have identified 16 risks and opportunities. Out of these, we are focusing on factors that allow us to evaluate their financial impact both quantitatively and qualitatively, such as the implementation of carbon taxes and the rising frequency and severity of natural disasters such as cyclones and floods, to determine their impact on our operating income in FY 2030.

Our analysis shows that introducing a carbon tax, categorized as a transition risk, would significantly reduce our operating income. This factor accounts for about 65%* of the total estimated financial impact for categories 1 and 4 of Scope 1, 2, and 3 in the 1.5°C scenario.

* Carbon tax prices are estimated independently and set using IEA-NZE's predicted values (Developed countries: 130 USD, emerging countries: 90 USD, exchange rate (JPY/USD): 122.39) and subtracting taxes equivalent to carbon taxes currently introduced in each country or region. (E.g., Japan's warming tax) The calculation of CO_2 emissions is done on a consolidated basis, which includes overseas bases. However, affiliated companies that have adopted the equity method are excluded from the scope.
To determine the impact on Scope 2 emissions, we consider the electricity emission coefficient (IEA WEO2021 data). Similarly, to determine the impact on Scope 3 Category 1 emissions, we estimate the pass-through rate to procurement costs based on our estimates. Our CO_2 emissions for fiscal 2021 are based on actual values.

Strategy

List of climate-related risks, opportunities, and countermeasures

Classification based on TCFD recommendations		Risk factor	Potential impacts	Financial impact at the time of occurrence		Possibility or feasibility of occurrence		Occurrence timing		Countermeasures
				1.5℃	4℃	1.5℃	4℃	1.5℃	4℃	
Transition risks	Policy and legal	Introduction and reinforcement of carbon pricing (carbon tax)	• Implementing a carbon tax would result in higher production costs due to taxing CO_2 emissions from in-house processes (Scope 1). • As Scope 1 accounts for less than 5% of the company's overall emissions, the financial impact is expected to be minimal.	Low	–	High	–	Mid-term	–	• Continued electrification of equipment and energy-saving improvement measures
			• Implementing a carbon tax would cause the taxes on CO_2 emissions from the usage of electricity, heat, and steam provided by other companies (Scope 2) to increase, leading to a rise in the cost of electricity rates and production costs. • While the likelihood of being taxed under Scope 2 is very high, the financial impact is expected to be relatively small.	Low	–	High	–	Mid-term	–	• Formulation and execution management of group-wide decarbonization plans by the CN Promotion Committee – Energy-saving measures and process innovations in production equipment – Promoting energy savings in manufacturing processes, including reviewing product design – Introduction of renewable energy (in-house power generation)
			• Introducing a carbon tax will increase the procurement costs for raw materials due to taxation of emissions from suppliers' production processes (Scope 3 Category 1) • Since prices are assumed to be passed on to customers, a significant financial impact is expected.	High	–	High	–	Mid-term	–	• Strengthening collaboration within the supply chain to enhance the understanding of emissions • Promoting initiatives in product design, such as using bio-based materials, conserving resources, etc.
			• Introducing a carbon tax will increase transportation costs (subcontracting costs) due to taxes on fuel (Scope 3 categories 4 and 9) used in logistics and delivery (upstream and downstream). • Although the possibility of taxing fuel-derived emissions is very high, the financial impact would be minimal.	Low	–	High	–	Mid-term	–	• Request and support for CO_2 reduction to logistics businesses • Promoting initiatives for non-transportation logistics, such as changing production plants and adopting local procurement to improve internal logistics efficiency • Improving loading efficiency through joint logistics with other companies, etc.

Strategy

List of climate-related risks, opportunities, and countermeasures

Classification based on TCFD recommendations		Risk factor	Potential impacts	Financial impact at the time of occurrence		Possibility or feasibility of occurrence		Occurrence timing		Countermeasures
				1.5℃	4℃	1.5℃	4℃	1.5℃	4℃	
Transition risks	Policy and legal	Strengthening of energy-saving regulations	• Regulations under the Energy Saving Act have been tightened in Japan (requiring a 1% annual improvement), while LCA-related regulations have been strengthened overseas. This will increase investment costs for upgrading to energy-saving equipment, putting pressure on profits. • Although the financial impact is significant, assessing the likelihood of the risk is necessary.	High	–	Medium	–	Mid-term	–	• Implementation of reduction measures for Scope 1 and 2
		Introduction of regulations regarding the environmental impact of vehicle life cycles	• Regulations have been introduced to reduce CO_2 emissions during the lifecycle of automotive parts. Raw material procurement costs have increased due to the switch to materials with a low carbon footprint (CFP), such as bio-resins. • As resin parts and materials make up a significant proportion of material costs, a notable financial impact is expected. • Switching to low CFP materials is expected to increase costs, and the financial impact of the rate of increase will significantly affect material costs.	High	–	High	–	Mid-term	–	• Implementation of reduction measures for Scope 1, 2, and 3 • In-house development of materials such as bio-resins, etc.
			• In particular, the disclosure of carbon footprint (CFP) for each automotive part is mandatory per the LCA regulations that take precedence in the EU. Non-compliance with the disclosure requirements can result in reduced sales due to lost opportunities. • There is a high possibility that sales will decline due to non-compliance with mandatory disclosure requirements, resulting in a significant financial impact.	High	–	Medium	–	Long term	–	• Understanding and disclosing the carbon footprint of each automotive part

Strategy

List of climate-related risks, opportunities, and countermeasures

Classification based on TCFD recommendations		Risk factor	Potential impacts	Financial impact at the time of occurrence		Possibility or feasibility of occurrence		Occurrence timing		Countermeasures
				1.5℃	4℃	1.5℃	4℃	1.5℃	4℃	
Transition risks	Technology	Customer requests for new technology development and introduction	• As companies evaluate their strategies for eco-friendly products, suppliers face increasing pressure to develop new technologies. Delayed responses may result in lost opportunities and decreased sales. • Although the financial impact is significant, assessing the likelihood of the risk is necessary.	High	–	Medium	–	Mid-term	–	• Share the latest trends on strategies related to customers' eco-friendly products within the company and incorporate them into measures and strategies, such as medium-term management plans • Review the structural design of headlamps
	Market	Changes in consumer behavior related to decarbonization (The selection criteria of products will be based on their CO_2 emissions.)	• Product selection will be based on CFP to ensure consumer favor and maintain sales. • Although the financial impact is significant, assessing the likelihood of the risk is necessary.	High	–	Medium	–	Long term	–	• Developing "favored" products that combine product functionality and performance with CO_2 emission reduction
	Reputation	Intensifying requests for disclosure of environmental information	• Climate change-related information disclosure is becoming more stringent and mandatory. Failure to respond in a timely manner can cause a decline in ratings by ESG assessment agencies, impacting stock prices and damaging reputations. • Although the financial impact of this risk occurrence is moderate, the financial impact and the possibility of its occurrence must be assessed.	Medium	–	High	–	Short term	–	• Strengthen disclosure by ensuring accurate and complete information and obtaining third-party assurance of the content to be disclosed • Ascertain trends in information disclosure regulations in our business regions promptly • Strengthen engagement with key stakeholders, including investor briefings and individual meetings

Strategy

List of climate-related risks, opportunities, and countermeasures

Classification based on TCFD recommendations		Risk factor	Potential impacts	Financial impact at the time of occurrence		Possibility or feasibility of occurrence		Occurrence timing		Countermeasures
				1.5℃	4℃	1.5℃	4℃	1.5℃	4℃	
Physical risks	Acute	Increased severity and frequency of cyclones and floods	• Natural disasters such as cyclones and floods may cause flooding of offices or production bases, which can cause damage to equipment and premises, resulting in restoration costs. • Given the current location of our bases, there is a moderate possibility of this occurring, but with a small financial impact.	Low	Low	Medium	Medium	Short term	Short term	• Weather disaster countermeasures for factories • Strengthening the understanding and monitoring of physical risks from a medium- to long-term perspective • Adopting multi-line production processes that allow for alternative production methods at a lower cost
			• Increase in insurance premiums due to the increasing severity and frequency of natural disasters. • Although the financial impact will be small, the possibility of this occurrence is high as there are already signs of increases in insurance premiums due to climate change.	Low	Low	High	High	Short term	Short term	
			• Natural disasters like cyclones and floods can cause flooding in offices or production bases, resulting in suspended operations and decreased sales due to a drop in production volume. • Given the current location of our bases, there is a high possibility of this occurring, but with a small financial impact.	Low	Low	Medium	High	Mid-long term	Mid-long term	

Strategy

List of climate-related risks, opportunities, and countermeasures

Classification based on TCFD recommendations		Risk factor	Potential impacts	Financial impact at the time of occurrence		Possibility or feasibility of occurrence		Occurrence timing		Countermeasures
				1.5℃	4℃	1.5℃	4℃	1.5℃	4℃	
Opportunities	Resource efficiency	Resource-saving and recycling	• The promotion of resource-saving and recycling activities will create a recycling market and open up new sales opportunities. • The financial impact is moderate since recycled parts have a lower market value than new parts.	Medium	–	Medium	–	Short-term	–	• Promote recycling of in-house products • Promote collaboration with other companies to create a recycling market
	Market and Services	Opportunities to enter new markets and acquire new customers (electronic equipment parts)	• The emergence of new markets and needs in response to climate change (decarbonization and increased severity of natural disasters) will create new supply sources for existing products, resulting in increased sales. • The financial impact will be moderate if we successfully enter new markets.	Medium	Medium	Medium	Low	Short-term	Mid-term	• Establish sales channels for our UV products and technologies, etc., in response to climate change.
			• The emergence of new markets and needs in response to climate change (decarbonization and increased severity of natural disasters) will create new supply sources for new products, resulting in increased sales. • The financial impact will be moderate if we successfully enter new markets.	Medium	Medium	Medium	Low	Mid-term	Mid-term	

(4) Examining measures to address risks and opportunities (STEP 4)

The Stanley Group has identified 16 risks and opportunities and developed countermeasures for risks such as the increased severity and frequency of cyclones and floods, etc. Refer to pages 7-11.

Initiatives to reduce climate change risks (resilience enhancement)

The Stanley Group is taking steady steps to achieve carbon neutrality in response to the introduction of the carbon tax and increasing raw material procurement costs, which have a significant financial impact. These steps include implementing energy-saving activities and developing resin materials in-house, etc. By reducing CO_2 emissions, the Group aims to mitigate the risks associated with climate change in the medium- to long-term, strengthening its resilience.

At Stanley Group, we are committed to minimizing energy waste in manufacturing by leveraging our expertise in cost-reduction activities without relying heavily on renewable energy sources. Our approach involves implementing manufacturing reforms that enhance energy efficiency, such as by adopting unconventional production methods and technologies that require less heat energy during production. Our goal is to provide environmental value while ensuring increased profitability.

Concept of reducing CO_2 emissions towards 2030

Area of focus	Path of reductions	Priority measures
• **Important reductions will be targeted in Scope 2, which accounts for 95% of the manufacturing area.** • In Scope 3 Category 1 raw materials, our focus will be on the in-house development of resins, which are a significant component of our products.	Until FY 2025, we will undertake basic energy-saving measures such as daily energy-saving improvements and updating of aging equipment and technical preparations. After this period, the energy reduction efforts will be accelerated through reform measures, resulting in a 50% reduction by FY 2030.	Achieve a 50% reduction **through manufacturing reform measures to improve energy efficiency.** Our manufacturing processes primarily involve converting electricity to heat. We will reduce electricity consumption by **reducing heat usage during manufacture.**

Strategy

The CN Promotion Committee is working on a roadmap to achieve carbon neutrality and formulating medium- to long-term investment plans to reduce CO_2 emissions. The CN promotion managers at all production bases – executive general managers, factory managers, and presidents of affiliated companies – along with the base CN promoters will be implementing the measures planned and developed by the CN Promotion Committee through the Global Environmental Conservation Activity Committee with the “One Stanley” concept, ensuring that the same activities are undertaken at the same time.

Our Hiroshima Factory in Japan has undergone a transformation to become a leading example in promoting carbon neutrality. Furthermore, we have established carbon-neutral promotion factories across the Americas, Europe, Asia-Pacific, and China. Each of these factories has a detailed deployment strategy customized to the unique features of the region.

Metrics and Targets

The Stanley Group previously used CO_2 emissions per unit of basic added value to evaluate its environmental performance in terms of climate change. From now on, to achieve carbon neutrality, we have decided to adopt the absolute amount of CO_2 emissions as the evaluation indicator and established new targets for FY 2021, as shown below.

- FY 2030: Reduce the amount of CO_2 emissions from our business activities by 50% (compared to FY 2019)
- FY 2050: Achieve carbon neutrality

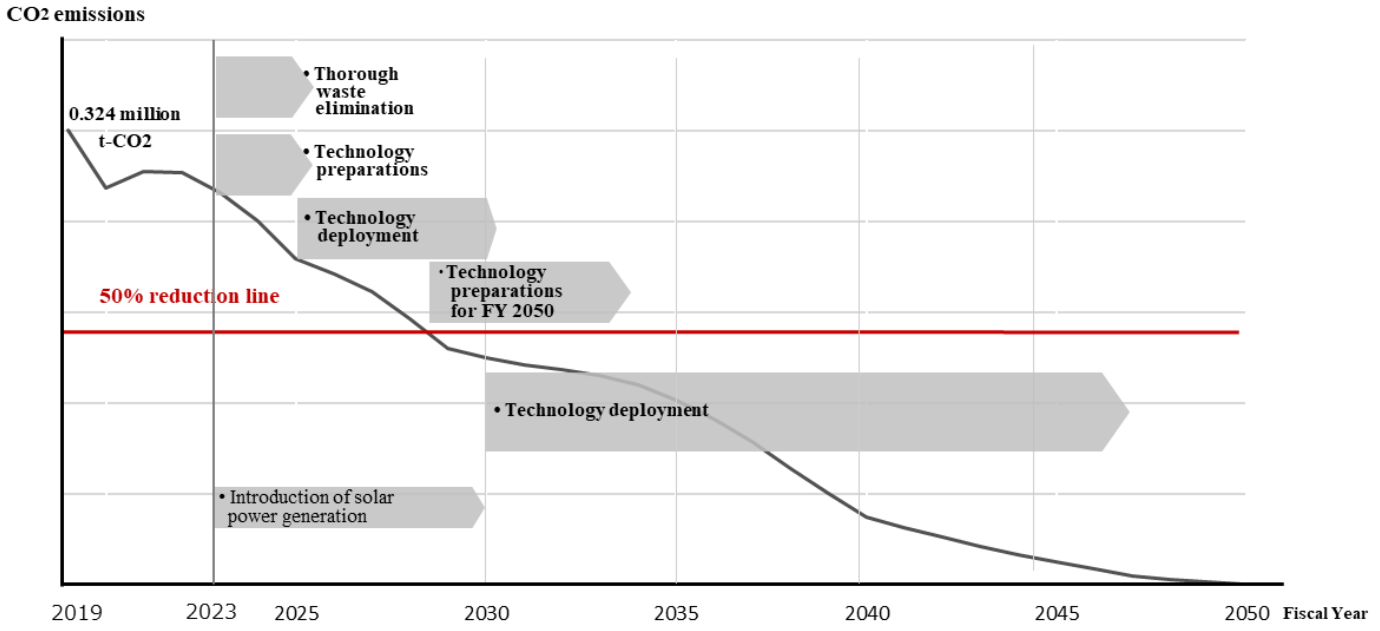
Metrics and Targets

The Stanley Group has established a roadmap to achieve the targets of “FY 2030: Reduce the amount of CO_2 emissions from our business activities by 50% (compared to FY 2019) and FY 2050: Achieve carbon neutrality,” which is illustrated in the diagram below.

From now until FY 2025, we will be implementing rigorous energy-saving measures such as daily operational improvements and the replacement of aging equipment, etc. to eliminate waste in our manufacturing processes. We will also be focusing on developing new technologies for manufacturing reforms, which we will implement in FY 2026. We aim to reduce our CO_2 emissions by half by FY 2030 by deploying these manufacturing reforms horizontally. Additionally, to achieve carbon neutrality by FY 2050, we will allocate 50% of our research and development efforts towards carbon-neutral development while applying new technologies starting from FY 2030 onwards.

Roadmap for achieving carbon-neutrality by FY 2050

CO_2 emissions from our manufacturing processes (Scope 1 and Scope 2)



* The equity method companies are not included in the calculation.