

Initiatives on Climate Change

(disclosure based on the framework of TCFD recommendations)



Arisawa Mfg. Co., Ltd.
June 27, 2024

We consistently improve our environmental protection activities by promoting the reduction, etc. of electricity and gas consumption, hazardous chemical substance, and industrial waste in accordance with the Environmental Policy, as the Environmental Protection deliberates on the activities.

Under the philosophy that the solution of environmental issues leads to value creation for society as well as the reduction of business risks, we publicized “Carbon Neutral Initiatives” on our website in June 2021 because we especially recognize climate change as a pressing issue.

This document describes our initiatives related to climate change based on the framework of the TCFD recommendations, dividing into Governance, Strategy, Risk Management, and Metrics and Goals.

Contents

I . Governance	3 - 4
II . Strategy	5 - 8
III . Risk Management	9 - 10
IV . Metrics and Goals	11 - 13



We established the ESG Committee in December 2021 in order to take the lead in addressing climate change issues. At the committee, a director and senior managing operating officer serves as a chairperson, and operating officers and general managers of each division serve as members, promoting the organized activities.

The ESG Committee deliberates four times a year on themes, such as responding to climate change, realizing a decarbonized society, respecting for human rights, considering for working environment, and having fair and appropriate transactions with business partners, in addition to enlightening and promoting sustainability-conscious management. Each committee periodically reports important agenda items and activity status to the Board of Operating Officers, the Management Conference, and the Board of Directors, and the Board of Directors makes final decisions. Please refer to the ESG Promotion Structure on page 4 for a promotion system on ESG.

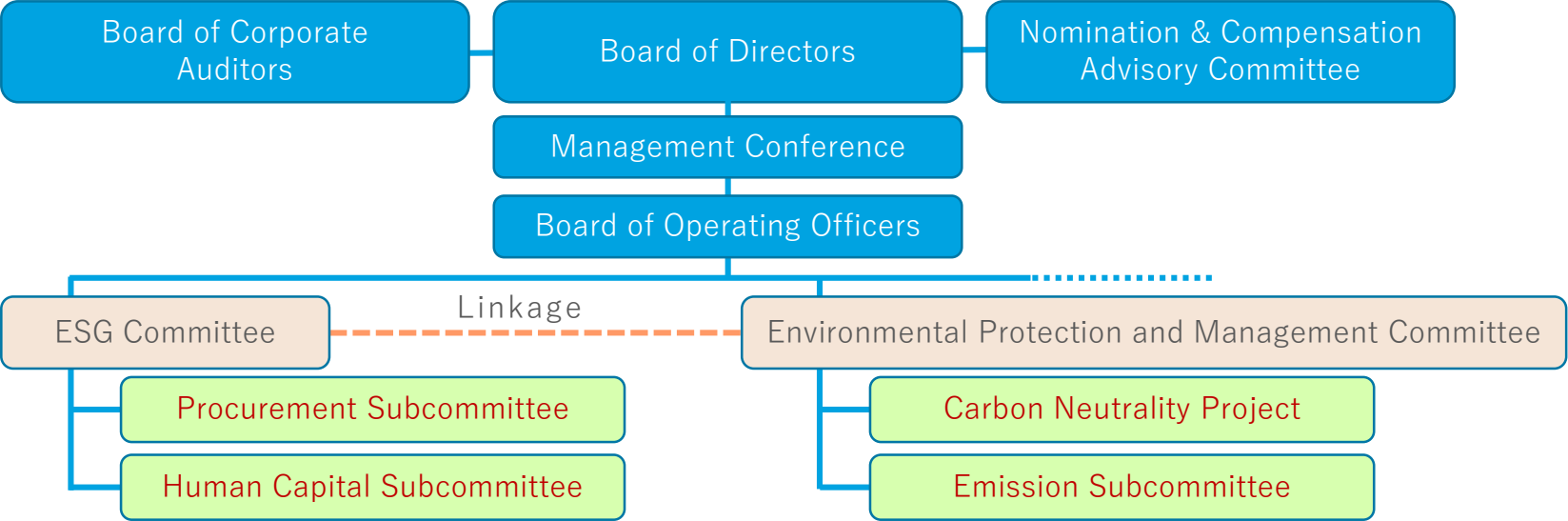
Regarding environmental conservation activities, the Environmental Protection and Management Committee, which works with the ESG Committee, supervises the progress of activities conducted by the Carbon Neutrality Project and the Emission Subcommittee and continuously improves them.

The Board of Directors checks the progress of the mid-term management plan, discusses measures for issues, and reflects the results in the management strategy and risk management and assessment based on the periodic reports. The Board of Directors is responsible for debating ESG-related agendas and supervising the goal-setting and the progress of initiatives.

ESG Policy

In all aspects of our business activities, Arisawa actively addresses a variety of issues related to environment, society and governance and aims to achieve sustainable growth.

ESG Organization Chart



Board of Directors	<ul style="list-style-type: none">• Supervise the entire sustainability
ESG Committee	<ul style="list-style-type: none">• Promote the entire activities to overcome challenges for sustainability, such as establishing a general sustainability policy, coordinating to set division goals, and managing their progress
Procurement Subcommittee	<ul style="list-style-type: none">• Procure eco-friendly materials, provide suppliers with training on human rights, labor rights, safety and health, and corporate ethics in accordance with the CSR Procurement Policy, and establish a socially acceptable supply chain
Human Capital Subcommittee	<ul style="list-style-type: none">• Develop human resources who can implement CIC and promote human resource development by linking management strategy to human resource strategy• Develop future leader candidates who can achieve diversity and ensure equal opportunities
Environmental Protection and Management Committee	<ul style="list-style-type: none">• Manage budgets and conduct company-wide coordination for activities to reduce environmental loads, such as setting goals for the Carbon Neutrality Project and the Emission Subcommittee and managing their progress
Carbon Neutrality Project	<ul style="list-style-type: none">• Establish and implement measures to achieve carbon neutrality by 2030, such as capital investment, technological innovation, use of renewal energy, and improvement in energy use efficiency
Emission Subcommittee	<ul style="list-style-type: none">• Take the initiative in reducing, removing, and recycling emissions and waste generated in business activities• Research the technology trend toward the realization of zero emissions in 2050

Contents

I . Governance	3 - 4
II . Strategy	5 - 8
III . Risk Management	9 - 10
IV . Metrics and Goals	11 - 13

II. Strategy

Upon scenario analysis, the ESG Committee identifies significant risks and opportunities related to climate change and assesses financial impacts that those would have.

The scenario analysis we conducted analyzed and examined the effects as of 2030 by using two scenarios, the 4°C scenario* and the 1.5°C scenario**, targeting at our whole supply chain from purchase, development, production to sales of products and services.

*4°C scenario: a scenario where climate change measures do not make any progress from the current situation and the global average temperature rises by approximately 4°C by the end of the century compared with pre-industrial levels. It is assumed that, while physical risks increase such as an increased severity of extreme weather events and rising sea levels, regulations on corporate and consumption activities do not become stricter than the existing ones.

**1.5°C scenario: a scenario where initiatives to realize carbon neutrality are more active and the rise of the global average temperature is limited to 1.5°C by the end of the century compared with pre-industrial levels. It is assumed that, while the increase of physical risks is limited, the tightening of corporate and consumption activities in the form of tax system and legal regulations is strengthened.

Source: The Ministry of the Environment “Practical Guide for Scenario Analysis in line with TCFD Recommendations 3rd edition”

【The risks and opportunities presented by climate change】

We believe that it is important to contribute to movements for limiting temperature increase because climate change due to global warming has a huge impact on society.

We also believe that climate change is likely to cause risks such as damage to us and our supply chain due to flood damage of typhoon, heavy rain, etc. and the increase of expenses such as the introduction of carbon taxes, credit purchase, the replacement of facilities, the purchase of renewable energy, etc. associated with the tightening of regulations.

On the other hand, we see the provision of products accommodating the increased environmental awareness of customers as an opportunity for our business. In particular, not only do we respond to climate change by supplying materials for FCV and EV, solar power generation, seawater desalination treatment, aircraft (weight reduction), and a decarbonized new energy development project, but we also contribute to the improvement of living environment by supplying materials for automated driving assist, medical devices, etc.

【 II – 1. Risks】

Transition risks: the impact of transition to a decarbonized society;
 Physical risks: the impact of natural disasters including floods and storms;
 Timeframes: short (-3 years), medium (3-10 years), long (10+ years);
 Assessment (small, medium, large): analyzing quantitatively and qualitatively, and assessing relative impacts.

	Factors	Timeframes	Financial Impacts	Assessment	Responses
Transition	Carbon price (carbon taxes)	Medium-Long	• Increase in operating costs due to the implementation of carbon taxes	【1.5°C】 Large	<ul style="list-style-type: none"> • Set targets for energy saving and CO₂ emissions reduction in the company-wide environmental targets • Set targets for achieving carbon neutrality by 2030 • Save energy and purchase renewable energy • Set targets for a recycling rate • Reduce energy consumption by productivity improvement • Renew energy-saving equipment in compliance with regulations • Promote capital investment by introducing ICP
	Emissions trading	Medium-Long	• Additional costs incurred for credit purchases, etc.	【1.5°C】 Large	
	Response to GHG emissions regulations	Medium-Long	<ul style="list-style-type: none"> • Increase in costs for renewing equipment fixtures with high efficiency • Regulations on the use of chlorofluorocarbon 	【1.5°C】 Large	
	Plastic regulations	Medium-Long	• Increase in costs due to regulations on plastic packaging materials and products	【1.5°C】 Medium	<ul style="list-style-type: none"> • Reduce usage • Recycle film winding core (plastic pipe)
	Renewable energy policy	Medium-Long	• Increase in energy costs due to higher renewable energy prices	【1.5°C】 Large	<ul style="list-style-type: none"> • Set targets for energy saving and CO₂ emissions reduction in the company-wide environmental targets • Promote investment in energy saving • Reduce energy consumption by productivity improvement • Set targets for achieving carbon neutrality by 2030
	Change in raw material costs	Medium-Long	<ul style="list-style-type: none"> • Increase in procurement costs due to carbon taxes and other regulations • Increase in raw material costs due to soaring crude oil and copper prices 	【1.5°C】 Large	<ul style="list-style-type: none"> • Reduce the usage of raw materials by improving yield • Select suppliers based on risk assessment
	Change in customer reputation	Short-Long	• Decrease in sales due to suspension in trading and market share loss when environmental friendliness cannot be addressed	【1.5°C】 Large	<ul style="list-style-type: none"> • Introduce our initiatives by externally delivering the Environmental Policy and issuing environmental reports • Publicize initiatives for ESG, TCFD, and carbon neutrality • Issue integrated reports
	Change in investor reputation	Short-Long	• Avoidance of investment and loan from financial institutions and investors when disclosing climate change-related information is delayed	【1.5°C】 Large	

	Factors	Timeframes	Financial Impacts	Assessment	Responses
Physical	Increased severity of extreme weather events	Short-Long	<ul style="list-style-type: none"> • Increase in costs to deal with the suspension of operations and logistics functions • Delivery delay of procured materials • Increase in procurement (transportation) costs 	【1.5°C】 Medium 【4°C】 Large	<ul style="list-style-type: none"> • Store inventory of four months' worth of raw materials whose replacements are not available in raw material procurement • Require suppliers of BCP measures • Use a dual vendor system • Increase productive capacity with capital investment • Renew aged buildings
	Rise in average temperature	Short-Long	<ul style="list-style-type: none"> • Increase in energy costs with increase in the frequency of the use of air-conditioners 	【1.5°C】 Small 【4°C】 Medium	<ul style="list-style-type: none"> • Set targets for energy saving and CO₂ emissions reduction in the company-wide environmental targets • Promote investment in energy saving

【II – 2. Opportunities】

	Factors	Timeframes	Financial Impacts	Assessment	Responses
Transition	Emissions trading	Medium-Long	<ul style="list-style-type: none"> Additional revenue when emission allowances are excess 	【1.5°C】 Large	<ul style="list-style-type: none"> Set targets for energy saving and CO₂ emissions reduction in the company-wide environmental targets Set targets for achieving carbon neutrality by 2030 Save energy and purchase renewable energy Set targets for a recycling rate Reduce energy consumption by productivity improvement Renew energy-saving equipment in compliance with regulations Promote capital investment by introducing ICP
	Progress of low-carbon technologies	Short-Long	<ul style="list-style-type: none"> Increase in sales of materials for electronic parts due to the increased demand for EV Increase in sales of materials for fuel cell due to the increased demand for fuel-cell vehicles Increase in sales of materials for hydrogen generation devices due to the increased demand for hydrogen energy Increase in sales of carbon cloth prepregs and honeycomb materials due to the increased demand for the weight reduction of vehicles and aircrafts 	【1.5°C】 Large	<ul style="list-style-type: none"> Develop and promote sales of high heat-resistant FPC materials for EV and high heat-dissipation/insulation adhesive sheets Develop and enter into markets for hydrogen generation devices
	Change in customer reputation	Short-Long	<ul style="list-style-type: none"> Increase in market share by receiving a high reputation in markets when environmental friendliness can be addressed 	【1.5°C】 Large	<ul style="list-style-type: none"> Introduce our initiatives by externally delivering the Environmental Policy and issuing environmental reports Publicize initiatives for ESG, TCFD, and carbon neutrality Issue integrated reports
	Change in investor reputation	Short-Long	<ul style="list-style-type: none"> Easiness to obtain investment and loan from financial institutions and investors when climate change-related information is disclosed more than other companies 	【1.5°C】 Large	
Physical	Increased severity of extreme weather events	Short-Long	<ul style="list-style-type: none"> Increase in sales of seawater desalination treatment devices due to the impact of water stress Increase in demand for and sales of electronic devices due to lower human mobility 	【1.5°C】 Medium 【4°C】 Large	<ul style="list-style-type: none"> Promote sales in the electronic materials field and of filament winding products

Contents

I . Governance	3 - 4
II . Strategy	5 - 8
III . Risk Management	9 - 10
IV . Metrics and Goals	11 - 13

III. Risk Management

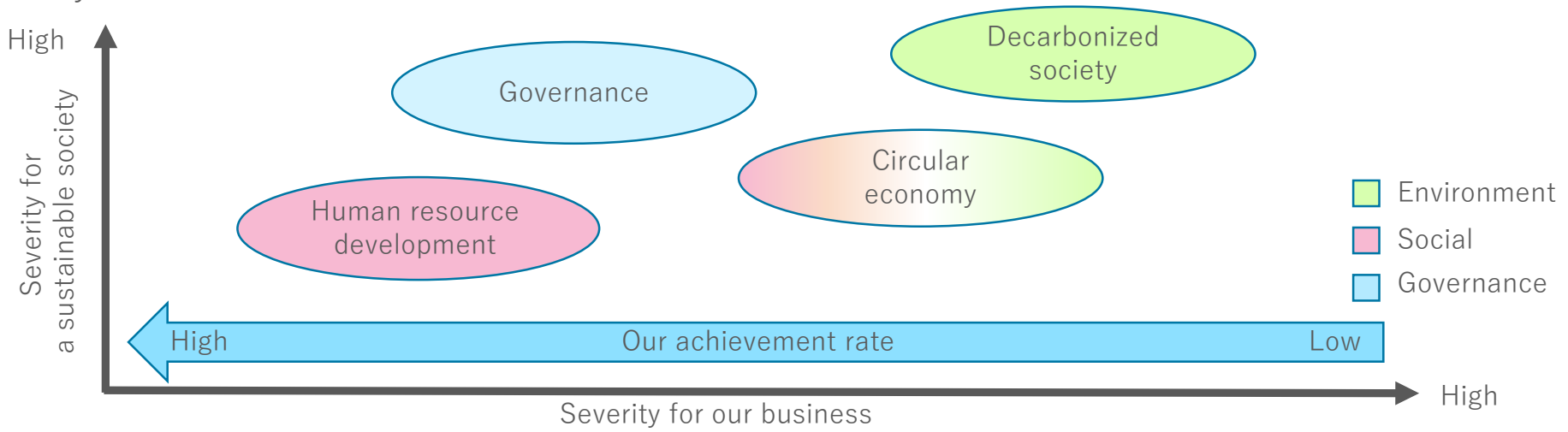









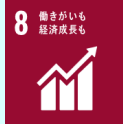









We recognize that climate change-related risks are important management issues. Therefore, the ESG Committee identifies and assesses the climate change-related risks, and reports to the Board of Operating Officers, the Management Conference and the Board of Directors, thereby defining key issues. We improve our risk management system by managing these risks.

As for assessing the climate change-related risks, upon identifying climate change factors in businesses, we assume the changes of future regulations, and societal, technological and climate conditions for each 1.5°C and 4°C scenario.

Also, we discussed how to respond to changes in external environments due to environmental issues and how to contribute to international Sustainable Development Goals (SDGs) at the ESG Committee meetings. Consequently, we designated the following four items as materiality to be tackled in our mid-term management plan: "Contribution to a decarbonized society", "development of diversified human resources and improvement in job satisfaction", "promotion of circular economy", and "enhancement of governance". To solve these issues, we make company-wide efforts.

In the process of identifying materiality, we had the ESG Committee narrow the items down to four based on the severity for a sustainable society and the severity for our business.



Materiality	KGI (Key Goal Indicator)	Promising global goals
Contribution to a decarbonized society	<ul style="list-style-type: none"> • Achieve carbon neutrality by 2030 • Promote energy and resource saving • Replace with renewable energy • Offer low environmental load materials 	 
Development of diversified human resources Improvement in job satisfaction	<ul style="list-style-type: none"> • Develop next-generation human resources • Be a company where all employees can work lively 	   
Promotion of circular economy	<ul style="list-style-type: none"> • Reduce emissions • Establish a sustainable supply chain 	       
Enhancement of governance	<ul style="list-style-type: none"> • Be an organization with a strong sense of ethics • Build an organizational structure with an open-door policy 	  

Contents

I . Governance	3 - 4
II . Strategy	5 - 8
III . Risk Management	9 - 10
IV . Metrics and Goals	11 - 13

We have implemented various measures to improve energy use efficiency. From now on, we will not only expand the deployment of the measures, but also aim to achieve carbon neutrality in FY2030 (compared to CO₂ emissions in FY2020)* in terms of direct emissions (Scope1) and indirect emissions (Scope2) by using renewable energy and purchasing carbon neutral gas as well as promoting the development of low-carbon products.

Summary of initiatives on carbon neutrality

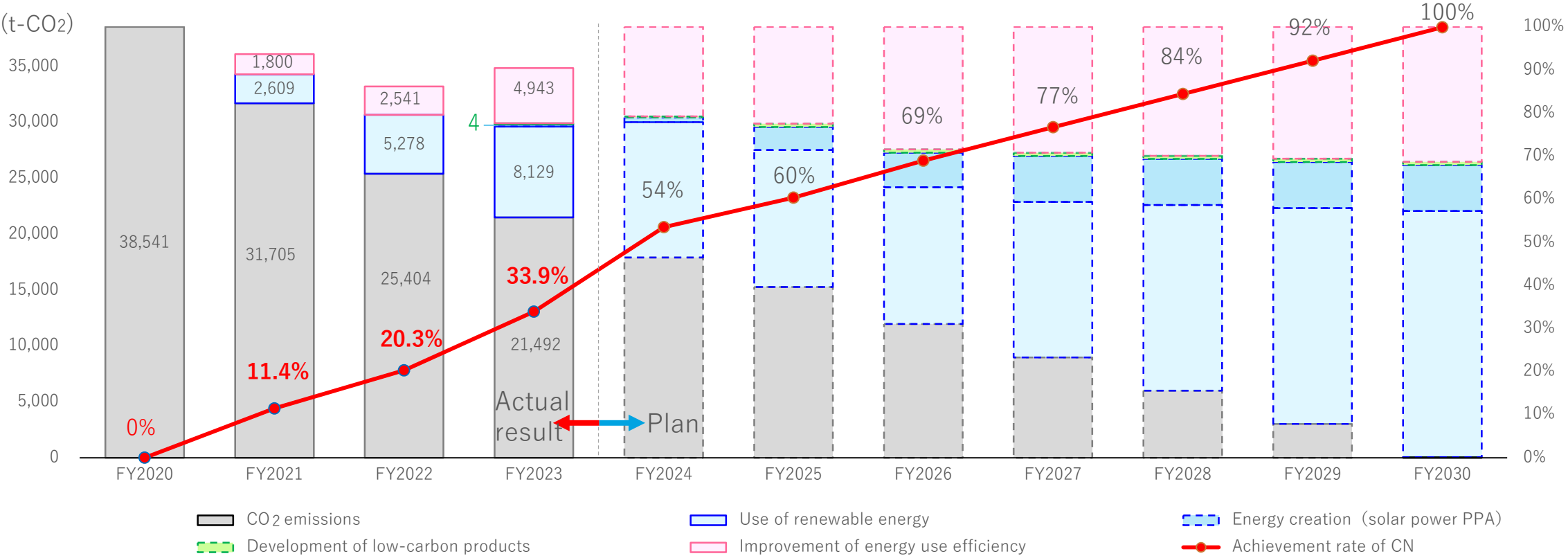
- Purchase of renewable energy electricity started (since July, 2021)
- Purchase of carbon neutral gas started (since July, 2021)
- Improvement of energy use efficiency
(e.g., waste heat recovery for production equipment, improvement in efficiency of A/C and steam equipment)
- Introduction of solar power (onsite PPA) (operation started from June, 2024)
- Development of low carbon materials
(e.g., reducing energy in production process, reducing consumption of organic solvents)

*Subject sites: Arisawa Mfg. Co., Ltd. and some of its domestic group companies
(Minami-honcho Factory, Nakadahara Factory, Nakadahara-nishi Factory)

【IV – 1. Actual result and plan for achieving carbon neutrality】



* Target: CO2 direct emissions (Scope 1) and indirect emission (Scope 2)
* Target sites: Arisawa Mfg. Co., Ltd. and some of its domestic group companies
(Minami-honcho Factory, Nakadahara Factory, Nakadahara-nishi Factory)



Achievement rate of CN (carbon neutrality) = (Total of renewable energy, energy creation, low-carbon products, and energy utilization efficiency) / CO2 emissions in FY2020

【IV – 2. CO₂ emissions of consolidated companies】

CO₂ emissions has been calculated for the whole Arisawa Group including overseas consolidated subsidiaries.
(Actual result for the whole Arisawa Group in FY2023 will be reported in the integrated report to be issued in November 2024.)



			FY2020		FY2021		FY2022		FY2022	
Target sites			Domestic consolidated companies		Domestic consolidated companies		Domestic consolidated companies		Consolidated companies including overseas	
Scope/Category			CO ₂ emissions (t-CO ₂)	Ratio	CO ₂ emissions (t-CO ₂)	Ratio	CO ₂ emissions (t-CO ₂)	Ratio	CO ₂ emissions (t-CO ₂)	Ratio
Scope1			17,779.3	8.6%	16,747.4	9.3%	14,165.3	8.2%	16,486.1	6.7%
Scope2			20,487.0	9.9%	15,816.8	8.7%	12,516.1	7.2%	26,786.6	11.1%
Scope3			168,109.7	81.5%	148,493.5	82.0%	146,839.1	84.6%	200,851.7	82.3%
Upstream	Category1	Purchased goods and services	149,410.3	88.9%	129,548.9	87.2%	128,782.3	87.7%	172,895.0	86.1%
	Category2	Capital goods	5,918.6	3.5%	6,193.2	4.2%	6,813.9	4.7%	12,268.8	6.1%
	Category3	Fuel- and energy-related activities not included in Scope 1 and 2	7,325.6	4.4%	6,883.7	4.6%	5,881.8	4.0%	8,485.0	4.2%
	Category4	Transportation and distribution (upstream)	2,803.9	1.7%	3,010.0	2.0%	2,513.9	1.7%	3,969.1	2.0%
	Category5	Waste generated in operations	1,488.2	0.9%	1,656.3	1.2%	1,521.7	1.0%	1,586.5	0.8%
	Category6	Business travel	56.9	0.0%	102.1	0.1%	209.0	0.1%	370.0	0.2%
	Category7	Employee commuting	892.1	0.5%	900.7	0.6%	983.5	0.7%	1,080.4	0.5%
Down stream	Category12	End-of-life treatment of sold products	214.1	0.1%	198.6	0.1%	133.0	0.1%	196.9	0.1%
Total			206,376.0	100.0%	181,057.7	100.0%	173,520.5	100.0%	244,413.5	100.0%

Scope 3 is calculated using GLIO B2_GHG, the Ministry of the Environment DB and other factors.