CENTRAL GLASS

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CENTRAL GLASS

Be a Specialty Materials Company

2025
INTEGRATED REPORT

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Report Period
April 1, 2024 to March 31, 2025
(including certain activities before and after the period in question)

Scope of the Report
Central Glass Co., Ltd. and consolidated subsidiaries

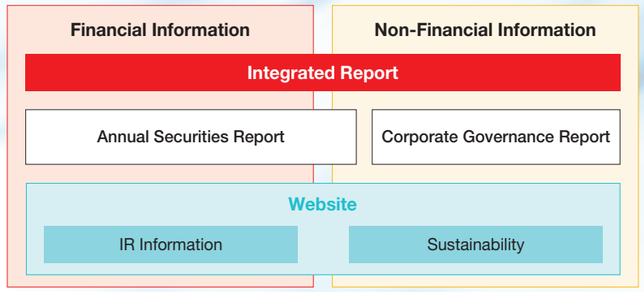
Referenced Guidelines
- *Integrated Reporting Framework*, The International Financial Reporting Standards Foundation (IFRS)
- *Guidance for Integrated Corporate Disclosure and Company-Investor Dialogue for Collaborative Value Creation*, Ministry of Economy, Trade and Industry
- *GRI Standards*, Global Reporting Initiative (GRI)

Environment Social Governance
Guidance for Collaborative Value Creation

Importance and Completeness
We edited this report to focus on information of particular importance, for ease of reading, and for understandability. Our corporate website includes detailed information disclosures in response to requests from stakeholders.

Notes Concerning Forward-Looking Statements
This report includes statements on projections and forecasts regarding strategies, results, and plans for the future.
Actual results may vary from these projections and forecasts due to various factors.

Disclosure Structure



About Central Glass

Growth Trajectory

Central Glass was established in 1936 as a manufacturer engaged in the production and sale of soda products. We developed our business across a wide range of fields, and have continue to endeavor every day to meet the needs of society since.

1936

Ube Soda Industry Co., Ltd., our predecessor, was founded in October 1936 by inaugural president Nobuyoshi Kuniyoshi, after which the company constructed the Ube Plant. The company began producing caustic soda in 1938 and soda ash in 1940. Although operations were suspended at the end of the war due to war damage, the company was listed on the Tokyo Stock Exchange in 1949 in the wake of postwar reconstruction.

Ube Soda Industry, factory (ca. 1937)

1950-

In 1953, the company entered the fertilizer business.
Through the integrated production of everything from soda ash to sheet glass, the company continued to add value and expand. The former Central Glass Co., Ltd. was established in 1958, and the company entered the sheet glass business.
In 1959, Central Glass constructed the Sakai Plant, and in 1963, Ube Soda Industry merged with the former Central Glass, changing the corporate name to Central Glass Co., Ltd.
The company also constructed the Matsusaka Plant.

NPK compound fertilizer plant under construction

1970-

In 1971, the company entered the glass fiber business, establishing Central Glass Fiber Co., Ltd.
In 1974, the company completed a hydrogen fluoride plant was completed on the grounds of the Ube Plant, and the company focused on the business of manufacturing organic fluorine compounds.

Central Glass Fiber Co., Ltd.
(Central Glass Fiber Matsusaka Plant, 1973)

1980-

With growing worldwide interest in the functionality of fluorine compounds, the company decided to develop and commercialize added-value hydrogen fluoride products.
Over time, the company completed multi-purpose plants for the production of organic fluorine and other facilities at the Ube Plant, completing the foundation of the fine chemicals business.

Multipurpose production facility for organic fluorine (1984)

1990-

Started selling inhalation anesthetics using active pharmaceutical ingredients made by the company, contributing significantly to business performance growth.

2000-

With the globalization of the automotive industry, the company entered into a business alliance with the Saint-Gobain Group of France, establishing a joint automotive glass sales company, Central Saint-Gobain Co., Ltd.
We subsequently absorbed Central Chemical Co., Ltd., a joint venture, and reorganized the entity into the new Kawasaki Plant.

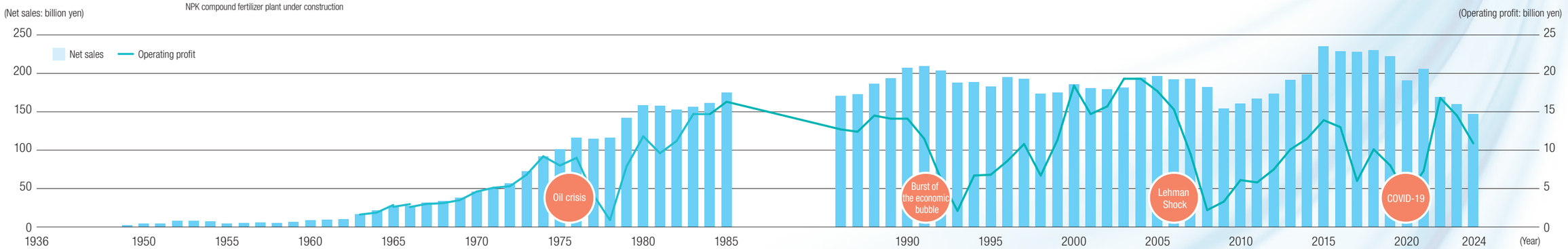
Central Glass Czech s.r.o.
(Czech Republic)

2010-

We concentrated management resources in promising business fields, such as electronic materials for semiconductors and electrolytes for lithium-ion batteries.
In 2017, we established Central Glass Czech s.r.o. in the Czech Republic to manufacture and sell electrolytes for lithium-ion batteries.
In 2015, we ceased production of soda ash, our original business.

2020-

We continued to improve the structure of the glass business, which faces an ongoing difficult business environment. We streamlined production systems by consolidating and eliminating domestic production bases.
In 2022, we withdrew from an overseas glass business in which we had a controlling interest.
In 2023, we transferred the domestic glass business to Central Glass Products Co., Ltd., and the company conducted a fundamental structural review to focus on improving profitability.



*Non-consolidated results through 1982; consolidated results beginning in 1983.

Our History

Creating a Better Future Through Monozukuri

The Central Glass Group contributes to the establishment of a truly prosperous society through the spirit of *Monozukuri*.

* *Monozukuri* refers to all the business activities in which the Central Glass Group engages with a basic stance of integrity and sincerity, including R&D, quality-oriented manufacturing, and sales.

Contribute to the realization of a sustainable society through innovative materials and technologies

Become a Specialty Materials Company contributing to the realization of a sustainable society

Proactivity	We approach our work proactively, with a heightened sense of awareness and a broad perspective.
Challenge	We openly share ideas and embrace challenges without fear of change.
Respect for Individuals	We create a positive workplace by respecting each other's human rights and individuality.
Integrity	We act with integrity, adhering to laws, regulations, and rules and taking responsibility for our actions.
Safety	We place top priority on safety in our work and strive to improve our own health.
Quality	We continuously seek to enhance quality and uphold our promises to society and our customers.
Environment	We contribute to the protection of the global environment by actively addressing environmental issues.

About Central Glass

Society and Central Glass

Our job is to manufacture products that create a sustainable society.

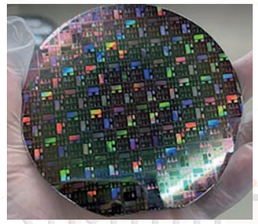
Central Glass pursues manufacturing through two key pillars: specialty products that create new value through proprietary research and development to support a sustainable society, and essential products that generate stronger earnings through enhanced added value.
Our extensive product lineup helps address social issues, including challenges in the environment.

Specialty Products

Semiconductor and Power Semiconductor Materials

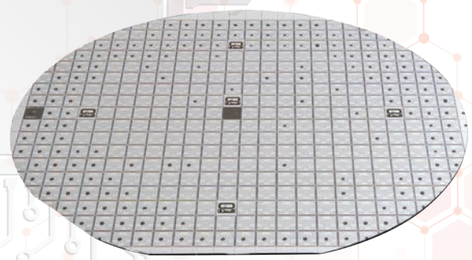
We provide high value-added products used in semiconductor manufacturing.
Our etching gases and other high-performance products support cutting-edge semiconductor manufacturing and low environmental impact, earning strong customer recognition.

- High purity gas for semiconductor processes
- Resist materials
- Pattern collapse prevention agent (Pattern Keeper)



Product of Chemical and Glass Technology Integration
Pattern Collapse Prevention Agent (Pattern Keeper)

Next-Generation Semiconductor Etching Gas
CEG® Series



Life & Science-Related Materials

We enhance health and quality of life through a wide range of products, including sevoflurane, an active pharmaceutical ingredient widely used for inhalation anesthetic with the global leading market share.

- Active pharmaceutical ingredients and intermediates
- Medical and pharmaceutical chemicals

No.1 Global Market Share

Battery Materials

We provide electrolytes for large lithium-ion batteries used in electric vehicles and energy storage systems, along with proprietary additives that enhance output performance and extend battery life.

- Electrolytes and additives for lithium-ion batteries
- Additives

Essential Products

HFO and Functional Materials

We enhance functionality in a wide range of industries by leveraging our core fluorine technology to provide HFO products, including blowing agents and solvents with excellent environmental performance, and functional materials that harness the unique properties of fluorine.

- HFO products (blowing agents and solvents)
- Functional materials containing fluorine
- Active ingredients and intermediates for agrochemicals

HFO Solvent Domestic Market Share **No.1**

Ozone Layer Protection and Global Warming Prevention Award
Minister of Economy, Trade and Industry Award

Glass Fiber

We provide unique glass fiber products with superior properties to meet diverse needs for a wide range of applications, including automotive, electronic materials, housing.

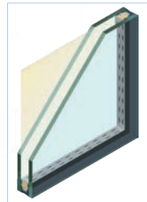
- Glass wool for vehicles
- Rubber coated class cords
- Chopped strands
- Milled fibers

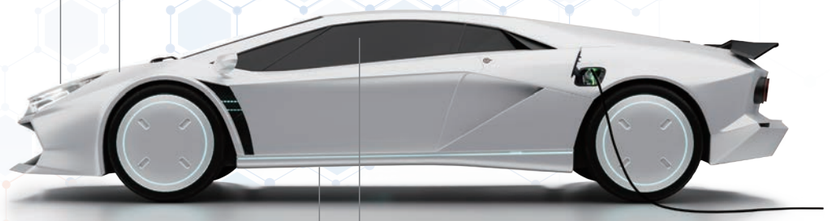
Domestic Market Share in Glass Wool for Automobiles **No.1**

Architectural Glass

We leverage our long-standing expertise in glass manufacturing to provide a diverse range of glass products for the building industry, from standard offerings to high-performance solutions.

- Eco-glass
- Safety laminated glass
- Tempered glass
- Mirrors





Automotive Glass

We provide high-quality automotive glass that delivers safety, comfort, environmental performance, and is compatible with information and communication technologies.

- Windshields
- Side windows
- Rear windows
- Sunroof windows

Fertilizers

We provide fertilizers, focusing on coated types, that support labor-saving and cost reduction in agriculture, where efficiency is essential.

- Coated fertilizers (Cera-coat R)
- NPK compound fertilizers
- NK compound fertilizers
- Ammonium chloride
- Mixed fertilizers

Sowing the Seeds of the Future Through the Power of Chemistry to Be a Specialty Materials Company

Welcome Message

Since our founding in 1936 as a chemical manufacturer engaged in the production and sales of soda products, Central Glass has expanded business to meet the needs of society and industry through fertilizer, glass, and glass fiber, ultimately expanding into the fine chemicals field.
And throughout our nearly century-long history, our constant mission has been to solve social issues and contribute to the creation of truly abundant society through *monozukuri* (manufacturing).
We continue to pursue this founding philosophy, aspiring to *Become a Specialty Materials Company contributing to the realization of a sustainable society*, as we state in our long-term VISION 2030. We will strive as a united Central Glass to achieve the targets of the new medium-term management plan, launched in FY2025.
You can count on the Central Glass Group to sow the seeds of the future through the power of chemistry, innovative materials, and creative technologies.

Representative Director, President & CEO
Kazuhiko Maeda

New Medium-Term Management Plan Based on Structural Improvements

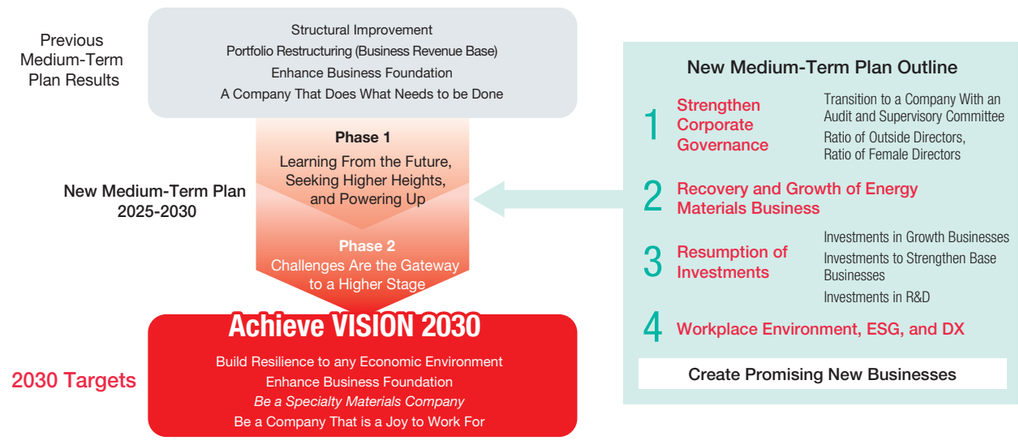
We are improving our structure by withdrawing from low-profit businesses, strengthening our business earnings base by reorganizing our portfolio, and reinforcing our financial foundation.

First, there is the Glass segment, which has been our traditional core business and which has been operating at a loss since 2007. To improve profitability, we made the decision to withdraw from certain businesses and reduce production to match demand in other businesses in this segment. In 2022, we completed the withdrawal from the unprofitable overseas automotive glass business, and we have been transitioning in Japan to a new structure that will support stable earnings. The glass fiber business, another Glass segment business, faced the headwinds of declining automobile production, but remained solidly profitable through a focus on product lines where we could best leverage our strengths. As we continue to make these structural improvements, we have been improving our overall business portfolio. We see Medi-Chemicals, Energy Materials, and Electronic Materials as the three pillars of the Chemicals segment. At the same time, *Specialty Products*, which we expect will create new value and business models, represent the focus of research and development. Meanwhile, we categorize stable core products that serve as the foundation for earnings as *Essential Products*, making it a point to move forward with both Specialty Products and Essential Products in parallel.

We posted strong financial results under this policy in FY2022 and FY2023. However, in FY2024, demand for electrolytes for EVs (electric vehicles), which had been growing, declined due to a variety of factors. As a result, the energy materials business decreased sharply by about 5 billion yen on a profit basis, falling into the red.

Results for FY2024, the final year of the previous medium-term plan, fell short of the financial targets of 14.0 billion yen in operating profit and 12% ROE. However, FY2022 and FY2023 results for operating profit were in excess of 14.0 billion yen for the two consecutive years, as we captured robust demand in the energy materials business, electronic materials business, and other businesses under the Chemicals segment. We more than doubled operating profit when comparing the three years of the previous medium-term plan with the three years prior to that plan. This improvement was the result of a major portfolio reorganization, including structural improvements in the Glass segment.

We have a track record of achieving V-shaped recoveries quickly after a downturn in performance due to social or market changes. This was the case in the wake of the COVID-19 pandemic, as well as the Lehman Brothers collapse before that. By keeping the seeds of our research and development warm and ready to go, we create new revenue-generating businesses smoothly, leading to this V-shaped recovery.



A New Medium-Term Management Plan in Two Phases Toward VISION 2030

In FY2025, we began executing a new medium-term management plan, which includes the year in which we plan to achieve VISION 2030. Our vision is to *Become a Specialty Materials Company contributing to the realization of a sustainable society*. To achieve this vision, we intend to strengthen the foundation of our business through the promotion of human capital management, response to environmental issues, and promotion of utilization of digital technology. As the second pillar of this business strategy, we will expand Specialty Products and strengthen Essential Products on our way to achieving operating profit of 20 billion yen and ROE of at least 10% by FY2030. The roadmap to achieving these goals forms the framework of the new medium-term plan.

We divided the new plan into two phases, Phase 1 and Phase 2. Phase 1 runs from FY2025 to FY2027, a time in which we will be learning from the future, seeking higher heights, and powering up. This process will solidify and strengthen our foundation for growth. The subsequent period between FY2028 and FY2030 is Phase 2, which states that challenges are the gateway to a higher stage. In this phase, we will deliver solid results, aiming for the VISION 2030 target of 20 billion yen in operating profit.

We recently changed the disclosed segments to enhance disclosure of these results and other information. Formerly, we disclosed information for the Chemicals segment and Glass segment. In FY2025, which is also the first year of the new medium-term management plan, we divided the Chemicals segment into Electronic Materials, Energy Materials, and Life & Healthcare, resulting in five disclosure segments.

A major point of the new medium-term plan and the crux of Phase 1 is the recovery of the electrolytes business. This business has been sluggish due to the decline in EV demand, and we intend to grow the business (investment strategy) going forward. To this end, we must accomplish three things.

The first is to acquire major customers in the electrolytes business who have promising futures and a strong position. Today, we still have some of the world's best companies as clients, and we will continue to grow our business with these clients. The second is to expand our Energy Materials business in China. Initially, we entered the Chinese electrolyte market directly. At a certain point, we could no longer come to terms with the competition and the market turmoil. At that point, we decided to sell licenses to our technology. Our superior technology has been recognized by the market, and we have already signed contracts with several companies. Chinese companies are predominant in Europe, and we believe we can approach the European market through the Chinese.

To this end, we have already taken several steps, and along with the recovery of the EV market, the Energy Materials business is on its way to a V-shaped recovery. Our plan is to return the business to profitability in FY2026 and reach operating profit of 3.0 billion yen in FY2027.

Former Disclosure Segments (Until FY2024) → New Disclosure Segments (Beginning FY2025)

Former Disclosed Segment	Business	Operating Profit (Billion yen)	FY2024 Results	Phase 1 FY2025	Phase 1 FY2027	Phase 2 FY2030
Chemicals	Electronic Materials	Electronic Materials	4.0	3.6	3.5	6.0
	Energy Materials	Energy Materials	-2.1	-2.1	3.0	5.0
	Medi-Chemicals	Life & Healthcare	6.0	4.9	4.7	6.0
	Applied Chemicals	Glass	2.5	1.0	1.8	3.0
	Fertilizers	Other	0.3	0.1	0	0
Glass	Glass	Consolidated total	10.6	7.5	13.0	20.0
	Glass Fiber					

Investing Actively in the Seeds of Next-Generation Earnings

The third element to accomplish our goals is investment strategy. We intend to implement an aggressive strategy of allocating management resources in a balanced manner to strengthen foundations for growth (Phase 1) and trace a trajectory for substantial growth (Phase 2).

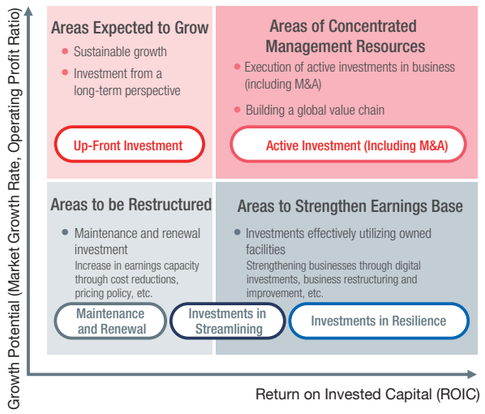
We adopted ROIC management under the new medium-term management plan to trace a clear path toward a growth trajectory. Return on invested capital (ROIC) is a financial indicator that measures how much profit is generated on the capital invested. We established an ROIC of 6.1% in Phase 1 and 7.0% in Phase 2.

The investment strategy of the new medium-term plan is to invest in growth businesses, with products for semiconductors in Electronic Materials leading the way. While we are not in the semiconductor-related stock classification in the capital markets, the reality is that our semiconductor products contribute significantly to our profits, and our semiconductor product line will be a driving force in the future. Research and development related to semiconductor materials and components is leading to increasing miniaturization and significant reductions in power loss. SiC power semiconductors are gaining attention as key devices for energy efficiency, and in response, the total investment for Phase 1 and Phase 2 of our new medium-term management plan will exceed 100 billion yen. Of that amount, we plan to invest 37 billion yen in growth areas, including Electronic Materials, to lay the foundation for achieving VISION 2030.

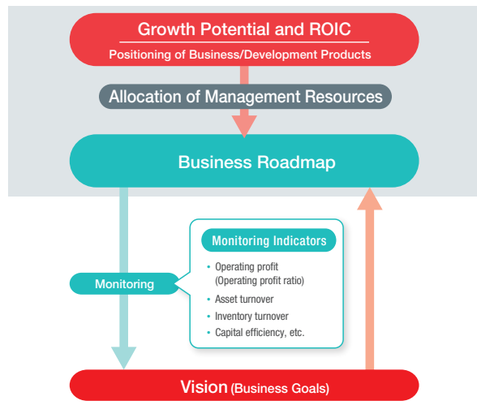
Besides the electronic materials field, we will focus on developing non-plastic coated fertilizer to contribute to sustainable agriculture and food security. Currently, problems surrounding rice production are becoming more serious. Due to the aging and shortage of farm laborers, the number of rice fields for planting rice is decreasing rapidly. Rice is a critical part of Japan's food security, and we want to provide labor-saving fertilizers properly suited to Japan's agricultural environment. We want to help farmers increase productivity, while at the same time providing environmentally friendly and sustainable fertilizers that solve the issue of microplastics. That is why we have developed a non-plastic coated fertilizer that we intend to launch in the future. We will begin actual trials in the rice paddies this year and over the next few years, investing on a scale that will eventually allow us to mass-produce.

We are also in the process of sowing the seeds for major revenue sources in the next generation, including a product called cell sheets that will function as a gateway to the life sciences. Research and development is at the core of our manufacturing, and we will continue to invest in the development of a wide range of seeds as important momentum for future businesses.

Investment Strategy



ROIC Management



Sustainability is an Integral Part of Central Glass

ESG management is the very management foundation that underpins the Central Glass businesses, as our Purpose is to contribute to a sustainable society.

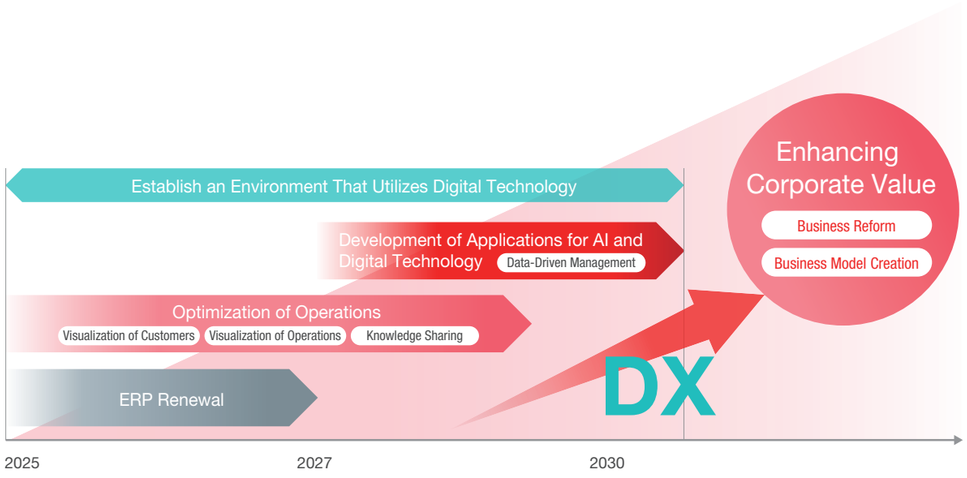
We develop and seek practical applications of environmentally friendly products and technologies, including the development of carbon-negative materials, the recycling of fluorine waste, and the recycling of glass used in solar battery panels. It is essential that we go beyond CO_2 credit trading to technologies and products that actually reduce CO_2 emissions. We believe that our technologies will contribute to the preservation of the global environment in practical ways.

We have been dealing with environmental issues in earnest, including achieving our 2030 GHG* reduction target ahead of schedule in 2022. In 2023, after discussions in our internal Sustainability Committee and other meetings, we formulated a plan for materiality that includes measures to address environmental conservation. In conjunction with the new medium-term management plan, we have once again established the materiality of environmental impact reduction, and we will pursue efforts to achieve our goals in this area.

We also pursue Digital Transformation (DX), and we plan to increase investments in DX during the course of the new medium-term management plan. DX initiatives are essential to improve operational efficiency and productivity to cope with the shortage of human resources due to the declining workforce. DX is also critical for ensuring the accuracy and reliability of data. We are already in the process of revamping our ERP system, and we will use the results as a foothold to develop an environment for DX. We plan to invest more than 10 billion yen in digital-related investments in Phase 1 and Phase 2 cumulatively. We aim to increase profits by 2.0 billion yen in FY2030 as a return on investment.

We will also strengthen governance. At the recent annual general meeting of shareholders, we transitioned to a Company with an Audit and Supervisory Committee. The role of the Board of Directors will be more closely aligned with monitoring, allowing for speedy business execution, with the results and details reported back to the Board. The Board will conduct discussions that contribute to improved corporate value over the medium to long term. Traditionally, the final decision-making body for companies organized with a Board of Corporate Auditors is the Board of Directors, which usually results in slow decision-making. We have changed the relationships of our organization to shorten decision-making, but we will still insist on proper supervision. We increased the ratio of outside directors to a majority of 60%, strengthening governance further. The Company reached a ratio of 20% female directors with the appointments of two women.

* Greenhouse gas



Creating Environments That Are a Joy to Work In

Who will be responsible for implementing these plans and strategies? Every employee of the Central Glass Group. We believe that human resources are our greatest management resource and the key driver of growth. We pursue human capital management in support of the growth of our people, who will continue to enhance our corporate value. To maximize the value of our human resources and to increase employee satisfaction, motivation, and productivity, we intend to increase investment in human capital in five areas that include strengthening human resources development, increasing employee engagement, and improving working styles and working environments.

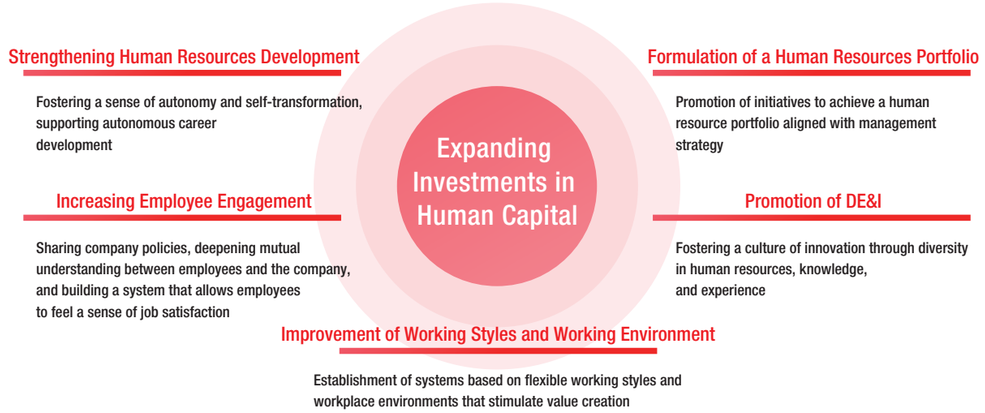
Our goal in human capital management is to be a company that is a joy to work for. We want to be a company in which every employee works diligently, pursuing their own goals and sense of mission. We want to be a company where employees look forward to the workday. To this end, we are engaging in direct dialogue with employees, while relocating offices and reconstructing buildings on plant sites. We plan to revamp our ERP and pursue DX to change the way we do business, making a more efficient and robust organization. Improving the work environment and sharing our aspirations in *monozukuri* will bring management and employees closer together. In this environment, both management executives and front-line employees will feel freer to challenge themselves. It will be a joy to work and to see the results of that work at each level. And tomorrow, we all will redouble our efforts. This is the kind of company we aspire to be.

A Company That Inspires Excitement

We are an R&D-oriented company focused on materials and technology, and our job is to leverage the power of chemistry to create things that do not yet exist in this world. This work is exciting. One gives shape to brand new ideas, presenting the results of research and development for all the world to see.

I want all of our employees, investors, and stakeholders to share in this excitement. We will continue to provide information to our stakeholders in a timely manner through integrated reports, business overview presentations, and our corporate website. By sharing information and incorporating feedback into business management, we will surely create a company where everyone—employees, business partners, and investors—shares in the excitement.

Human Capital Management Initiatives



New Medium-Term Management Plan

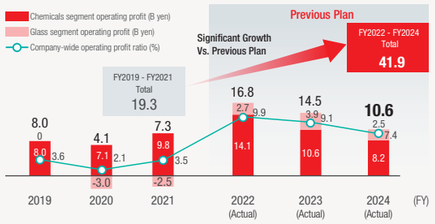
Review of the FY2022-FY2024 Medium-Term Management Plan (Summary)

Achieved final year financial targets for FY2022 and FY2023. Business environment deteriorated significantly in FY2024; underperformed target.

Financial Targets

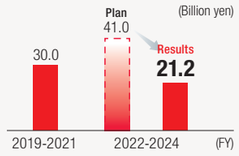
- We did not meet our FY2024 target due to poor performance of Energy Materials caused by declining demand for EVs. However, we achieved targets in the first and second years, posting operating income of in excess of 14 billion yen for two consecutive years by capturing firm demand in Chemicals. The results under the previous plan showed improvements in the Glass organizational structure and other outcomes of major portfolio revisions.

	Target	Results		
	FY2024	FY2022	FY2023	FY2024
Operating profit (Operating profit ratio)	14.0 B yen 8%	16.8 B yen 9.9%	14.5 B yen 9.1%	**10.6 B yen** 7.4%
ROE	12%	37.0%	11.4%	4.9%



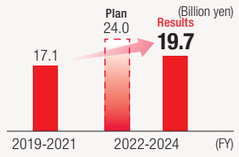
Investments

- We revised our plans in response to changes in the business environment, postponing the construction of a plant in Taiwan for Electronic Materials, as well as a new facility and expansions of existing facilities for Energy Materials. As a result, performance was lower than expected.



R&D Expenses

- We made steady progress in creating specialty products and developing new businesses by focusing on Electronic Materials and Energy Materials.



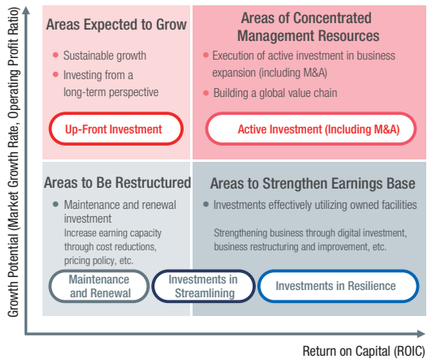
Overview of the New Medium-Term Management Plan

Basic Policy

We will continue to work on the two pillars of our business strategy of Specialty Products and Essential Products, pursuing the current policy under VISION 2030, namely, achieving operating profit of 20 billion yen and ROI of at least 10%.

Growth Strategy

We pursue an investment strategy to allocate management resources in a timely manner. Through these efforts, we strengthen foundations for growth in Phase 1 of the strategy, and create a trajectory for substantial growth in Phase 2. Under the previous medium-term management plan, we achieved a rebirth of Central Glass. The new medium-term management plan will be an important six-year period that will firmly sets us on the path to growth.



See *Message From the Director in Charge of Finance & Accounting* on P.16-19 for more on growth strategy.

Strengthening Our Business Foundation Through ESG Management

Human resources is an important asset for our company. We continue to invest in human capital to maximize the value of our human resources. At the same time, we intend to further expand investment in DX, which contributes to improved business productivity, as a means to cope with a declining workforce. In terms of the environment, we continue to contribute to reducing GHG emissions, promoting resource recycling, and developing and bringing environmentally friendly products to the market.

See *Sustainability Management* on P.48-85 for more on how Central Glass strengthens our business foundation through ESG management.

VISION 2030

Become a Specialty Materials Company contributing to the realization of a sustainable society

Basic Policy

Engage in management priorities within the framework of Phase 1 and Phase 2 toward the realization of VISION 2030, our long-term vision

Numerical Targets

Operating profit **20** billion yen × ROE At least **10%**

Business Strategies

Expand Specialty Products | **Strengthen Essential Products**

Growth Strategy

Investment strategy

- Balanced and optimal allocation of management resources based on analysis of growth potential and ROIC
- Growth investment with a medium- to long-term view that avoids short-sightedness

ROIC management

- Pursuit of vision based on business roadmap
- Improvement of capital efficiency through business ROIC monitoring

Strengthen Business Foundation Through ESG Management

Pursue Human Capital Management | Respond to Environmental Issues | Utilize Digital Technology

	Phase 1 (FY2025-FY2027) Strengthening Foundations for Growth		Phase 2 (FY2028-FY2030) Trajectory for Substantial Growth
	FY2025	FY2027	FY2030
Operating profit	7.5 B yen	13.0 B yen	> 20.0 B yen
Capital efficiency: ROE	4.7 %	8.7 %	> At least 10.0 %
Capital efficiency: ROIC	–	6.1 %	> At least 7.0 %
Segment Targets (Billions of yen)			
Electronic Materials	3.6	3.5	6.0
Energy Materials	-2.1	3.0	5.0
Life & Healthcare	4.9	4.7	6.0
Glass	1.0	1.8	3.0
Other	0.1	0.0	0.0

Message From the Director in Charge of Finance & Accounting

Central Glass pursues investments for growth and resilience, continuing to enhance sustainable corporate value as we maintain a sound financial foundation.

Central Glass is engaged in numerous measures toward achieving VISION 2030, our long-term vision. Over the next few pages, I will address the measures we are taking toward sustainable corporate value enhancement and targets of 20 billion yen in operating profit and ROE of 10% by the year 2030. My remarks will focus mainly on the initiatives and capital and financial strategies described in the new medium-term management plan disclosed during the management overview briefing of May 28, 2025.

Representative Director, Senior Executive Managing Officer
Tetsuo Kanai

Changes in the Business Environment Prevented Central Glass From Achieving Targets in the Final Year of the Previous Medium-Term Management Plan

FY2024 was the final year of the previous medium-term management plan. We began the plan with a strong start, and our Glass segment turned a profit in FY2022 as the structural improvement measures through the previous year bore fruit. The Chemicals segment also posted record-high operating profit in FY2022.

In FY2023, the Chemicals business experienced a negative rebound from the special demand for HFO products in the previous year. However, the Glass business recorded price improvements across the board, resulting in a generally high level of performance overall. Demand for electric vehicles (EVs) experienced sluggishness beginning in the middle of FY2023, and the impact of this slowdown was significant on FY2024 results. Sales of medical-related anesthesia, which have supported earnings to date, have been declining gradually with competition from other products in the market. The result, unfortunately, was that we failed to reach our target of 14 billion yen in operating profit established in the previous medium-term management plan.

While we have seen dramatic changes in the business environment, including weakening demand for EVs, I believe the measures implemented have not been in vain. We believe we will recover performance under the new medium-term management plan, as we implement more precise measures in response to the changing business environment.

Phase 1 to Strengthen Our Foundation, Phase 2 to Return to Growth

Under the new medium-term management plan for FY2025 to FY2030, our management targets for FY2027 are operating profit of 13 billion yen, ROE of 8.7%, and ROIC of 6.1%. For FY2030, the final year of the plan, we established targets of 7% for ROIC, 20 billion yen in operating profit, and 10% for ROE—all as stated in VISION 2030.

Now, I will discuss the targets for each of our businesses individually. In Electronic Materials, we plan to invest in greater production capacity for etching gases used in cutting-edge semiconductor manufacturing. We also plan to invest in R&D and engage in mass production related to entry into the high SiC single crystals and wafers business for power semiconductors based on new manufacturing technology. In Energy Materials, we intend to use Phase 1 as a period for recovery to build our business in Europe and increase sales volume in Japan and North America to customers who value the performance of our electrolytes, including OEM production contracts from our Chinese partners.

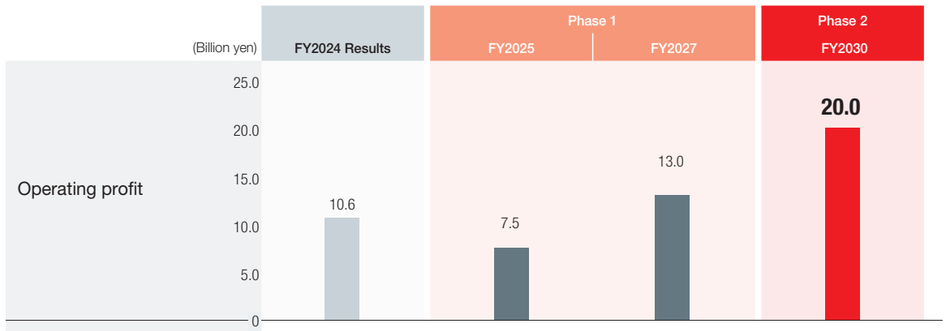
In Medi-Chemicals, which is under the Life & Healthcare segment, we plan to maintain top market share for the active pharmaceutical ingredient for sevoflurane, an inhalation anesthetic, while at the same time entering the market for regenerative medicine. To this end, we continue research and development into cell sheets, aiming to make this a business within the span of the new medium-term management plan.

In Applied Chemicals, we intend to expand the stable supply and sales of browing agent 1233E, while growing sales of 1233Z and winning new customers by creating mixes of this solvent for parts cleaning applications. We also plan to introduce new PFAS-free products, flame retardants, and antistatic agents. In Fertilizers, our aim will be the launch of proprietary non-plastic coated fertilizer in 2027.

In Glass and Glass Fiber under the Glass segment, we intend to stabilize operations and improve profitability, making new investments and strengthening the foundation of these fundamental businesses.

The three-year period beginning in 2025, which we call Phase 1, will be a time to strengthen the foundation for growth through investments in R&D and capital equipment. Over the three years beyond, from 2027 to 2030, we will return to a growth trajectory and achieve the targets described in VISION 2030.

Management Targets



		FY2024 Results	Phase 1 FY2025	Phase 1 FY2027	Phase 2 FY2030
Operating profit	(Billion yen)	10.6	7.5	13.0	20.0
Capital efficiency	ROE (%)	4.9%	4.7%	8.7%	At least 10.0%
	ROIC (%)	4.9%	-	6.1%	At least 7.0%

Improving Capital Efficiency Through ROIC Management

The new medium-term management plan includes two policies (described on the right side of the accompanying figure) to improve capital efficiency: Optimizing capital structure through detailed balance sheet management and capital allocation balancing active investments and stable dividends. While we expect interest-bearing debt to increase somewhat in the future as we invest more, we will improve capital efficiency by optimizing working capital and reducing total assets further. At the same time, we will endeavor to control excessive equity and achieve an optimal capital structure.

Many companies consider ROE to be the most important management indicator. Under VISION 2030, our target is to achieve ROE of at least 10%. A major factor in the ROE calculation is ROIC, which measures the amount of profit generated relative to invested capital. By improving ROIC, we expect to see an improvement in profitability relative to invested capital. Given our expectations that improved ROIC will lead to a significant improvement in ROE, we included ROIC as an indicator emphasized under the new medium-term management plan.

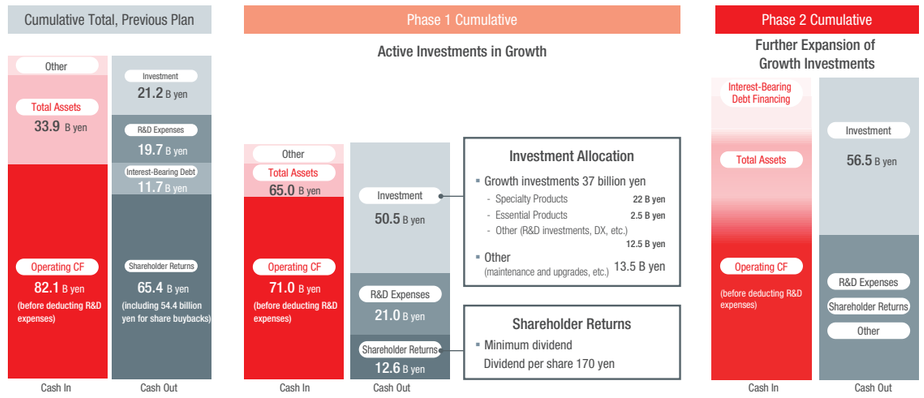
The Company will also evaluate businesses based on ROIC and growth potential to organize how we invest in and capitalize each business (portfolio). Under a new system, each business will formulate strategies and implement measures in line with its portfolio, while management confirms the strategies and measures proposed. In addition, mapping our direction in terms of growth potential and return on equity will provide investors with a clearer understanding of our investment decisions moving forward.

Capital Policies and Financial Strategies for Sustainable Corporate Value Creation

		FY2024	FY2027	FY2030
Indicators	Operating profit	10.6 B yen	13.0 B yen	20.0 B yen
	ROE	4.9%	8.7%	10.0% or more
	ROIC	4.9%	6.1%	7.0% or more
	Investment*	21.2 B yen*	50.5 B yen*	56.5 B yen*
	Interest-bearing debt	42.3 B yen	43.0 B yen	59.5 B yen

* Investment: Cumulative total of the respective three-year periods for the previous medium-term plan, Phase 1, and Phase 2

Capital Allocation



Planning a 170 Yen per Share Minimum Dividend

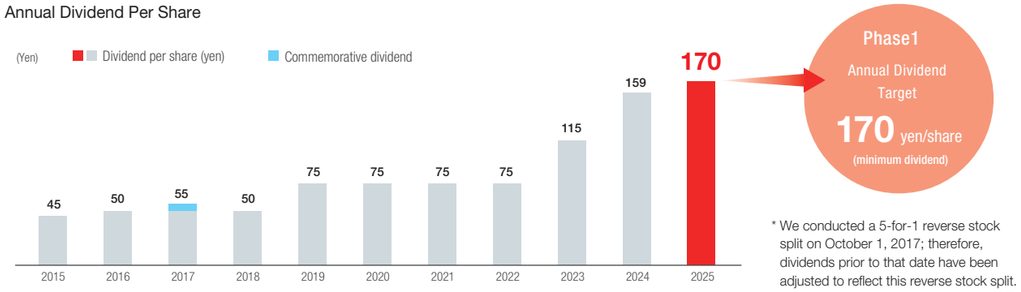
While performance in certain core businesses has been sluggish, due in part to changes in the business environment, we have generated solid operating cash flows. In addition, our financial situation is sound, allowing us the capacity to utilize debt. With these resources, we intend to allocate capital to growth investments throughout Phases 1 and 2.

Meanwhile, we will also continue to pay stable shareholder returns in Phase 1, planning a minimum dividend of 170 per share, which was both our FY2024 dividend and a record high.

We reviewed the previous medium-term management plan, noting that profits have been declining gradually compared to the past three years. The dividend payout ratio will most likely exceed 70% when looking at our earnings forecast for FY2025, which is not particularly low. Therefore, we believe a minimum dividend of 170 yen per share for Phase 1 is a level acceptable to our shareholders.

We also hope to enhance the level of returns afterward, once we are more certain of achieving our FY2027 targets. To this end, we will continue to pay a dividend of 170 yen per share for the next few years in the form of a minimum dividend, asking our shareholders to be patient as we return to growth.

Annual Dividend Per Share



* We conducted a 5-for-1 reverse stock split on October 1, 2017; therefore, dividends prior to that date have been adjusted to reflect this reverse stock split.
* We paid a commemorative dividend of 5 yen per share for FY2016.

Communicating Our Potential in the Face of Headwinds

Over our century-long history, Central Glass has experienced many downturns due to changes in the external environment. Each time, however, we accomplished a V-shaped recovery. In recent years, the driver of these recoveries has been new products based on our own research and development.

To communicate this potential and our capacity for growth in the future to our investors will require a commitment to dialogue. We stepped up the frequency of information sharing through our website and other means by 50% compared with the previous fiscal year. Last year, we began management overview briefing in which President Maeda discussed Central Glass management policies. In addition, we revise financial results presentation materials from time to time to enhance content. Beginning this fiscal year, we endeavor to publish information in a more timely manner through financial results presentations for investors held on the same day we publish our financial results disclosures. Investors require logical explanations of how shareholder returns align with capital and financial strategies. We are reminded often of how experienced investors are very critical in the way they look at a company.

Although our recent performance has been affected significantly by the external environment, I hope to use objective data to back up how we will overcome the changes in the external environment, launching new products and pursuing business strategies.

Crisis is an opportunity, and we will leverage the headwinds into energy for the next stage of growth. I encourage you to look forward as Central Glass enters a new growth phase toward the year 2030.

Our Value Creation Process

Input

Operating Capital

Financial Capital

● Financial base supporting value creation

Total assets, consolidated	204.8 B yen
Equity ratio	57.0 %
Rating (as of March 2024)	A- (JCR)

Manufacturing Capital

● Capital investment 7.9 B yen

Human Capital

● Diverse workforce

Employees, consolidated (as of March 2025)	3,354

Intellectual Capital

● Open innovation

R&D expenses	7.4 B yen
Patents held by the Company:	2,154

Social Capital

● Focus on dialogue with stakeholders

Total individual meetings	72

Natural Capital

● Reducing environmental impact

Total energy use	4,721 TJ
Water use	9,482,000 m^3

Business Activities

Business Activities

VISION 2030 (Our Vision)

Become a Specialty Materials Company contributing to the realization of a sustainable society

Materiality

Solution of Social Issues Through Business Activities
Measures for Environmental Protection
Enhancement of Business Foundations

Governance

Basic Philosophy *Creating a Better Future Through* Monozukuri

Output

Products and Services

Specialty Products (Including Developed Products)

Technological Advantage

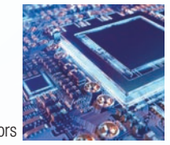
Intellectual property and other products based on unique technology

Three Advantages

Sustainability
Products that contribute solutions to social and environmental issues

Originality
Products that have established a unique and powerful business model

● Electronic Materials



Etching gases
Cleaning gases
SiC wafers
Bonding materials for power semiconductors
PFAS-free resist-related products

● Energy Materials

Electrolytes (for lithium-ion and sodium-ion batteries)
Next-generation battery materials, etc.

● Life & Healthcare

Pharmaceutical products
(e.g., inhalation anesthetics, cell sheets)
PFAS-free products
Non-plastic coated fertilizer

Essential Products

● Life & Healthcare

Hydro Fluoro Olefin (HFO) products
Functional material products, fertilizer products

● Glass

Architectural glass, automotive glass
Glass wool, glass fibers

● Other

Trading activities and other operations not attributable to any of the new reportable segments

Outcome

Our Value to Society

Purpose

Contribute to the realization of a sustainable society through innovative materials and technologies

● Expand offerings of environmentally friendly products

Provision and expansion of environmental contribution products (Chemicals business (total sales of low-GWP, energy-saving products))	59.4 B yen
GHG emissions avoided emissions by providing environmentally friendly products	4,500,000 t-CO_2
GHG emissions (vs. FY2013)	57.8 % reduction

● Stabilize shareholder returns by optimizing capital allocation

Operating profit (Operating profit ratio)	10.6 B yen (7.4%)
ROE	4.9 %
Dividends	170 yen

● Create value through DE&I and human resources development

● Foster peace of mind by strengthening quality management

● Enhance compliance system

Our Value Creation Story

Materiality

Central Glass identified issues from diverse perspectives, organizing and evaluating such issues from two perspectives: importance to various stakeholders and importance to our Group vision. We then determined materiality through discussions at the Board of Directors meetings. The Company set KPIs and related initiatives for 11 material issues in three areas.

Of these, we consider the *Solution of Social Issues Through Business Activities: Provision and Development of Products that Solve Social Issues* to be a top-priority issue, considering relationships with the business.

Materiality (FY2022-FY2024)			
Fields	Materiality (ESG)	Initiatives and Key Performance Indicators (KPIs)	2024 Results
I Solution of Social Issues Through Business Activities	[Environment] A Provision and Development of Products That Solve Social Issues	Offer and expand environmentally friendly products [Chemicals segment] (Total sales of low-GWP energy-saving products) Target: 100 billion yen (FY2024)	59.4 billion yen
		Offer and expand environmentally friendly products [Glass segment] (Sales volume ratio of eco-glass and thermal insulation automotive glass compared with FY2021) Target: 156% (FY2024)	140%
		Provide and develop coated fertilizers that help solve food issues [Fertilizer business] (Contribute to increase yield and labor savings) Pursue the early launch of environmentally friendly coated fertilizers and develop new fertilizers using unused resources (plant residues, livestock waste, etc.) with low environmental impact	In progress
		Strengthen R&D capabilities (focus areas: energy conservation, low GWP, SiC, CO_2 collection and utilization, PFAS compliance) Target: ・Electronic materials: Environment-friendly semiconductor materials and next-generation materials (SiC) ・Battery materials: Electrolyte (EV and stationary) and post-Li-ion battery development ★Develop medical materials and research pharmaceuticals, focusing on life science as a next-growth area	In progress
II Measures for Environmental Protection	B Measures for Climate Change	Reduce GHG emissions (Scope 1, 2) Target: 350,000 tons of CO_2 (FY2024)	316,000 tons of CO_2
		Avoided GHG emissions by providing environmentally friendly products Target: 6,800,000 tons of CO_2 (FY2024) *1	4,500,000 tons of CO_2
	C Improvement of Energy Use Efficiency	Improve GHG emissions intensity (GHG emissions/Net sales) Target: 1.8 t CO_2/million yen (FY2024)	2.2t CO_2/million yen
		Reduce water use (Improve water intake intensity per sales: Total water intake/Net sales) Target: 55.6 m^3/million yen (FY2024)	65.7m^3/million yen
		Reduce the final disposed amount of industrial waste Target: 88,000 tons (FY2024)	11,000 tons
III Enhancement of Business Foundations	[Society] D Diversity Equity, and Inclusion*2	Increase the ratio of female employees in career-track positions Target: 18.3% (FY2024)	16.2%
		Increase the ratio of male employees utilizing parental leave Target: 75% (FY2024)	83.6%
		Increase the employment rate of persons with disabilities Target: 2.6% (FY2024)	2.5%
		Implement Diversity and Inclusion management education (encourage managers to attend lectures) Target: 60% (FY2024)	59%
		Encourage employees to take annual leave Target: 80% (FY2024)	79.1%
	E Enhancement of Human Resource Development	Increase employee training opportunities (training hours per employee) Target: 20 hours*2	25 hours
		Improve and enhance employee education, including for Group companies Target: Aim to improve the value of the Group's human capital by improving and supporting education for Group companies (in Japan and overseas) to further develop their skills	In progress
	F Improvement of Quality Management	Reduce the number of complaints (percentage reduced year on year) Target: 25% reduction (FY2024)	9% reduction
		Maintain and improve quality through outsourced contractor audits (annual auditing execution rate) Target: At least 90% (FY2024)	106%
		Improve quality education Target: Improve workers' proficiency level by providing group-wide quality education, enhancing Monozukuri Education content at production sites, and increasing education opportunities.	In progress
	G Pursuit of Industrial Health and Safety, and Safety and Disaster Preparedness	Promote industrial health and safety (number of accidents that require leave) Target: 0 (FY2024)	7
		Promote safety and disaster preparedness (number of serious accidents) Target: 0 (FY2024)	0
	H Enhancement of Supply Chain Management	Pursue CSR procurement Target: Survey and evaluate the CSR of business partners. Monitor the status of their CSR procurement as necessary. Survey and evaluate 100% of new business partners and increase investigation ratio.	Survey at least 90% of business partners
	I Respect for Human Rights	Strengthen initiatives to respect human rights Target: Clarify and spread our human rights policy while enhancing in-house awareness-raising activities	In progress
	[Governance] J Enhancement of Compliance System	Enhance compliance education Target: Continue and further improve internal education (frequency and areas of study)	In progress
	K Enhancement of Corporate Governance	Improve the evaluation of the effectiveness of the Board of Directors Target: Aim to improve effectiveness through a self-assessment questionnaire (5-point scale)	4.2 (improvement compared to FY2023 results of 4.1)

Materiality Review Process

STEP 1 Identify Issues → **STEP 2 Reorganize and Evaluate Issues** → **STEP 3 Identify Materiality**

Select social issues based on current social, environmental, and economic trends, market trends relevant to the Company, as well as our efforts to enhance medium- to long-term corporate value for the Company and group companies. Identify elements of the issues in consideration of international guidelines (GRI, ISO 26000).

Confirm that there have been no changes in materiality since defining previous materiality, in light of the social situation and issues, as well as the Company's Purpose and VISION 2030.

Identify relationships with management policies, medium-term management plans, etc., and establish KPIs and initiatives.

We identified materiality, initiatives, and KPIs based on discussions in the Sustainability Committee and resolutions of the Board of Directors.

Materiality (FY2025-FY2027)			
Fields	Materiality (ESG)	Initiatives and Key Performance Indicators (KPIs)	2027 Targets
I Solution of Social Issues Through Business Activities	[Environment] A Provision and Development of Products That Solve Social Issues	Offer and expand environmentally friendly products [Chemicals segment] (total sales of low-GWP, energy-saving products)	76.0 billion yen
		Offer and expand environmentally friendly products [Glass segment] (Sales volume ratio of eco-glass and thermal insulation automotive glass compared with FY2024)	135%
		Offer and expand new PFAS-free products [Chemicals segment] (Ratio of FY2024 net sales)	250%
		Provide and develop coated fertilizers that help solve food issues [Fertilizer business] (Pursue environmental friendliness and contribute to labor savings in line with sustainable agriculture)	・Pursue the FY2027 launch of environmentally friendly coated fertilizers and develop new fertilizers using unused resources (plant residues, livestock waste, etc.) with low environmental impact
		Strengthen R&D (focus areas: energy conservation, low GWP, SiC, CO_2 collection and utilization, PFAS compliance, regenerative medicine)	・Electronic materials: Environment-friendly semiconductor materials (PFAS-free ArF resist) and next-generation materials (SiC), etc. ・Battery materials: Electrolyte (EV and stationary) and post-Li-ion battery development ・Life sciences: Develop medical materials (cell sheets) and research pharmaceuticals
II Measures for Environmental Protection	B Measures for Climate Change	Reduce GHG emissions (Scope 1 and 2)	320,000 tons of CO_2
		GHG emissions avoided by providing environmentally friendly products*1	5,800,000 tons of CO_2
	C Improvement of Energy Use Efficiency	Impact management for water use Central Glass Group water withdrawal (compared with FY2024)	3% reduction
		Impact Management for water use Number of violations of water pollution laws and regulations	0
		Reduce the final disposed amount of industrial waste (compared with FY2020)	15% reduction
III Enhancement of Business Foundations	[Society] D Diversity Equity, and Inclusion*2	Increase the ratio of female employees	13.5%
		Increase the ratio of male employees utilizing parental leave	84%
		Increase the employment rate of persons with disabilities	2.7%
		DE&I training (total percentage of managers taking related training)	96%
		Encourage employees to take paid leave	80%
	E Enhancement of Human Resources Development	Increase employee training opportunities (training hours per employee) *2	17 hours
		Improve and enhance employee education, including all Group company employees	Identify training issues and needs for employees in Japan and overseas; provide training support
	F Improvement of Quality Management	Eliminate serious quality issues (number of occurrences)	0
		Mitigate quality-related risks through outsourced contractor audits (annual auditing execution rate)	100%
		Improve quality education	Improve workers' proficiency level by providing group-wide quality education, enhancing Monozukuri Education content at production sites, and increasing education opportunities.
	G Pursuit of Industrial Health and Safety, and Safety and Disaster Preparedness	Promote industrial health and safety (number of accidents that require leave)	0
		Promote safety and disaster preparedness (number of serious accidents)	0
	H Enhancement of Supply Chain Management	Pursue CSR procurement	Strengthen our management of compliance with the Code of Conduct, focusing on suppliers of main raw materials. Request improvements and manage progress of corrective actions as needed.
	I Respect for Human Rights	Strengthen initiatives to respect human rights	Continue education on respect for human rights and enhance efforts related to human rights due diligence
	[Governance] J Enhancement of Compliance System	Enhance compliance education	Expand or revise training based on social, environmental, and economic trends; step up awareness-raising activities based on the results of monitoring
	K Enhancement of Corporate Governance	Improve the evaluation of the effectiveness of the Board of Directors	Aim to improve effectiveness through a self-assessment questionnaire (5-point scale).

*1 Based on the CO_2 emissions reduced at the use stage of the final products that use our environmentally friendly products. Avoided emissions are estimated using our unique formula to calculate reduced emissions through one year of use based on Company sales volume.
*2 Non-consolidated company and secondees

Special Feature Life & Healthcare Segment

Cultivating the vast medical and life science market with world-class research and development capabilities.

The Life & Healthcare segment is one of the key areas in the new medium-term management plan aimed at achieving VISION 2030. This segment is an area where Central Glass can fully demonstrate its unique research and development potential, including active pharmaceutical ingredient (API) for inhalation anesthesia, in which we have the world's largest market share. In this section, we present our products and technologies that will help us pioneer new markets in medical and life science.

Executive Managing Officer **Yoshinori Akamatsu**

Life & Healthcare-Related Businesses Covering Medical, Materials, and Agriculture

Effective from FY2025, due to the reorganization of disclosed segments, the Medi-Chemicals, Applied Chemicals, and Fertilizer businesses, which were previously classified in the Chemicals segment, are now classified in the Life & Healthcare segment.

In this segment, the three businesses will provide products that contribute to solving social issues in their respective fields, aiming for operating profit of 4.7 billion yen in FY2027 and 6.0 billion yen in FY2030. Here, we introduce four of our leading products and technologies in the Life & Healthcare segment.

Sevoflurane, the World's Leading API for Inhalation Anesthesia for More Than 30 Years

First, in the Medi-Chemicals Business, we produce and supply API for a general inhalation anesthetic called sevoflurane. Since 1990, we have been producing and marketing the sevoflurane API at our Ube Plant in Yamaguchi Prefecture, a long-selling hit for more than 30 years. Sevoflurane, which uses a Central Glass API, has enjoyed a leading global market share since its launch, and maintaining that share and a stable supply is a mission of utmost importance for our Medi-Chemicals business.

Sevoflurane is a fluorochemical. Central Glass has strengths in fluorine chemistry, and fluorine is a core technology in our R&D and business development. We produce hydrogen fluoride in-house from fluorite, and react this hydrogen fluoride with various raw material compounds to create a wide variety of fluorochemicals. One of these is providing the API for sevoflurane, an inhalation anesthetic.

Initially, we received inquiries from a drugmaker suggesting that, if such a compound existed, it would be safe for use on humans. Since we had already worked with hydrogen fluoride, our R&D efforts revealed how the compound sevoflurane could be produced through chemical reactions, and we began production at the Ube Plant with our own unique production process. We started out with multi-plant production, but later built a dedicated plant and increased capacity to ensure stable production 24 hours a day, 365 days a year. Even today, we retain world-leading manufacturing capacity.

A Good Manufacturing Practice (GMP) system must be in place for production of drug APIs. We must constantly maintain an advanced pharmaceutical quality control system, which is subject to U.S. FDA inspections and audits by the drugmakers we serve. In the production of sevoflurane, procurement and quality control of raw materials are critical, and we rigorously work to uphold stability and safety in the production process, which involves chemical reactions. I believe that the fact that Central Glass had its origins in synthetic organic chemistry, namely fluorochemistry, contributed to the stable quality and safety of sevoflurane.

The sevoflurane API we produce is marketed globally through pharmaceutical manufacturers in more than 110 countries around the world, including Japan, China, Europe, and the United States. In the medical field, it has been used as a general inhalation anesthetic in more than one billion cases for various surgical procedures, and is highly regarded by anesthesiologists as an easy-to-use and safe anesthetic. We will continue to optimize our production processes and equipment maintenance, while maintaining stable quality and safety under our GMP system and further improving productivity (labor and cost savings).

Commercialization of Cell Sheets, Opening the Door to the Field of Regenerative Medicine

In the Medi-Chemicals business, while strengthening the foundation of the sevoflurane business where we produce and supply our mainstay API, our next step is to search for new functional materials and to propose these materials to the market as new medical products here is regenerative medicine. We are searching for value-added materials and technologies and conducting market research. Currently, the New-STEP Research Center is developing cell sheets enabling proposals in the field of regenerative medicine.

In our R&D going forward, we will proceed to production process development, clinical trials, and regulatory approval, and we would like to clearly illustrate our path to commercialization with a strong awareness of VISION 2030 while accurately understanding development status. For more information on cell sheet development, see the article on the New-STEP Research Center on page 28.

Development of HFO- and PFAS-free Products, Bringing Together Central Glass's Proprietary Technologies

In the Applied Chemicals business, we are focusing on the development of hydrofluoroolefin (HFO)-related products. An HFO is a type of unsaturated fluorocarbon composed primarily of carbon and fluorine. The history of fluorocarbons is long, with commonly utilized compounds transitioning from the first generation of chlorofluorocarbons (CFCs), to the second generation of hydrochlorofluorocarbons (HCFCs), to the third generation of hydrofluorocarbons (HFCs), to the fourth generation of HFOs, which are considered the final solution. This transition represents the history of fluorocarbon manufacturers' technological innovations to address global society's need to reduce ozone depletion and greenhouse gas emissions.

In the past, CFCs and HCFCs were widely used as refrigerants, blowing agents, cleaning agents, and spray propellants. However, it was discovered that their use led to the depletion of the ozone layer (expansion of ozone holes) and became a serious social

problem worldwide; with the 1987 Montreal Protocol, ozone-depleting substances have been totally eliminated. Following CFCs and HCFCs, the non-ozone-depleting HFCs were developed and replaced the former ozone-depleting substances. However, since HFCs are greenhouse gases with a high global warming potential (GWP) (regulated in Japan by the *Act on Rational Use and Proper Management of Fluorocarbons* and the revised *Act on the Protection of the Ozone Layer Through the Control of Specified Substances, etc. and Other Measures*), a fluorocarbon with a low GWP that does not deplete the ozone layer was needed, and various types of HFOs have been explored and developed.

Central Glass previously produced and marketed CFC-113 as a cleaning agent, HCFC-141b as a cleaning and blowing agent, and HFC-245fa as a blowing agent and refrigerant. However, in the late 2000s, we quickly started to explore HFOs and develop production processes to manufacture and sell three HFO products [(HFO-1234ze(E) was introduced to the market in 2008 as a flame-proof gas, HFO-1233zd(E) in 2012 as a blowing agent and refrigerant, and HFO-1233zd(Z) in 2015 as a cleaning agent)]. We were the world's first company to begin commercial production of these HFOs, and they continue to form the basis of our Applied Chemicals business. I believe that we were able to achieve this because of our ongoing accumulation of technological expertise in fluorine since the days of CFCs, HCFCs, and HFCs, and furthermore because of our sensitivity to global regulatory trends and our ability to lead the development of the next materials and production technologies. In the Applied Chemicals business, our next focus is on PFAS-free development, utilizing our strengths in fluorine technology toward creating new PFAS-free compounds. PFAS (per-/polyfluoroalkyl substances) have long been used in a wide variety of high-performance products because of their excellent water- and oil-repelling characteristics and heat resistance. Some kinds of PFAS, such as PFOA and PFOS (also called specific PFAS substances) are subject to international regulation because they do not easily break down in the environment and remain in the human body and ecosystem for a long time. Currently, there are discussions in Europe to define and regulate all kinds of PFAS. However, since many fluorine materials are widely used and have an extremely large impact on industry, it will be necessary to discuss their toxicity in practical terms, and it is likely to take some time before specific regulations and legislation are put in place.

Even so, the fluorine products we manufacture are compounds that fall within the definition of PFAS, which is currently being discussed in broad terms, and may be subject to PFAS regulations depending on future regulatory trends. Fluorocarbons, intermediates for agrochemicals, and fluorine compounds for industrial use handled by our Applied Chemicals business are PFAS in the broadest sense. In order to keep a close watch on the PFAS regulations under discussion and take appropriate actions, we are participating in the Conference of Fluoro-Chemical Product Japan (FCJ) established by several domestic companies to promote information gathering and public relations activities. Meanwhile, we are also exploring and developing PFAS-free compounds as a way to develop technologies for the future. Specifically, we are seeking new and PFAS-free antistatic agents and flame retardant agents. We expect the trend of PFAS regulations to become clearer around 2027 or 2028. We will work to develop new materials and production processes while preparing for stricter regulations.

Non-Plastic Coated Fertilizer Contributing to Sustainable Agriculture

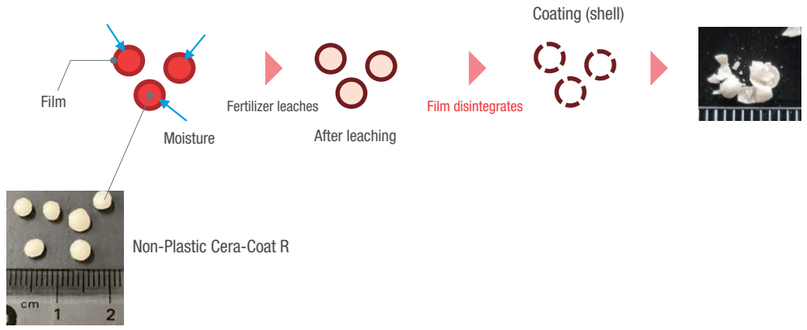
In the Fertilizers business, we will launch our proprietary non-plastic coated fertilizer. Coated fertilizers are products that, once applied to rice paddies, leach out the necessary fertilizer components at the required time, supporting Japan's rice farming industry that needs to save labor in agricultural work. Currently, most coating materials distributed in Japan are made of plastic, and the industry is working to solve the problem of marine plastic waste by declaring that by 2030, agriculture will not depend on plastic-coated fertilizers. We have developed an environmentally friendly coated fertilizer that does not use plastics, and are currently working to develop mass production technology with the aim of bringing it to market in 2027.

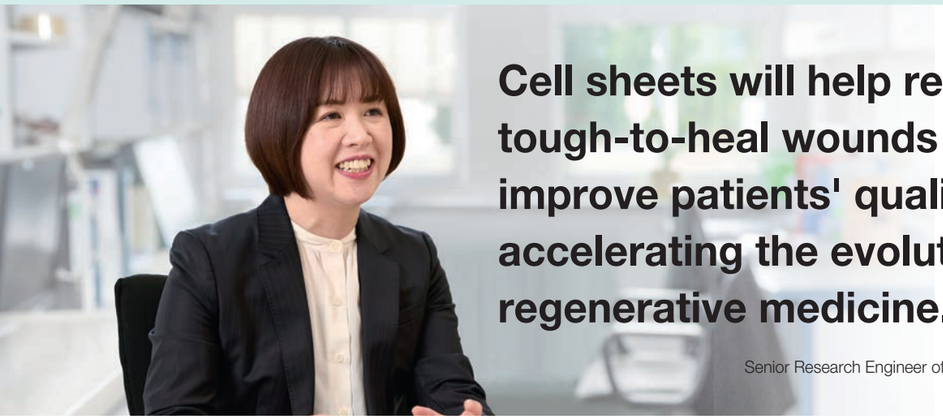
Our non-plastic coated fertilizer is called Non-Plastic Cera-Coat and is made by coating fertilization components with a non-plastic material, which offers the same leaching performance for fertilizer components as existing coated fertilizers, and the coated shells disintegrates easily after leaching. By saving labor in agricultural work, it improves agricultural productivity, and helps to solve the marine plastic problem.

At the United Nations, discussions are underway for the total elimination of plastics by 2050. Most recently, at the G7 Ministers' Meeting on Climate, Energy and Environment held in 2023, there was broad agreement to reduce intentional plastic emissions to zero by 2040. The agricultural industry has called for the development of a coated fertilizer that does not rely on plastics by 2030. These developments have accelerated the development of non-plastic coated fertilizers. Although the volume of coated fertilizers we can produce when they are launched in 2027 is still limited in light of the volume of coated fertilizers we sell now, we plan to supply a certain volume to the market ahead of our competitors and expand our coated fertilizer business by 2028 or 2029 through a full-scale production system and marketing. This is what we have set forth in our VISION 2030, which is the most important achievement goal of our Fertilizers business and a specific initiative for us to undertake.

Our fertilizer market is not limited to Japan. We are involved in Japan Vietnam Fertilizer Company (JVF), a joint venture that supplies fertilizers to Vietnam, Cambodia, Malaysia, and other grain-producing areas of Southeast Asia. Although coated fertilizers are not yet used in Southeast Asia due to cost concerns, as populations age and labor saving becomes necessary in agriculture, like in Japan, a need will surely arise for coated fertilizers in these areas, and the provision of coated fertilizers will come into the realm of possibility. At that time, JVF would like to commercialize non-plastic coated fertilizers and contribute to the sustainability of agriculture not only in Japan but also in Southeast Asia.

The seeds of diverse research and development at Central Glass are waiting for the time to sprout in line with social trends. Among them, the seeds of the Life & Healthcare segment are expected to grow into the next business pillar in the large market of medical and life science. We hope you will keep an eye on the scale of growth we achieve in the new technologies and businesses introduced here.





Cell sheets will help regenerate tough-to-heal wounds and improve patients' quality of life, accelerating the evolution of regenerative medicine.

Senior Research Engineer of New-STEP Research Center
Yuki Nakanishi

Cell sheets are expected to be one of the new pillars of our LIfe & Healthcare segment. Cell sheets mass-produced from healthy human cells are expected to stimulate treatment for people suffering from intractable skin ulcers and other conditions, and have the potential to drive the evolution of regenerative medicine. Yuki Nakanishi, leader of development at Central Glass's New-STEP Research Center, talks about the forefront of cell sheet development, which is aimed at practical application through joint research with Yamaguchi University Faculty of Medicine and Health Sciences.

From Eco-Glass to the Development of Cell Sheets

I joined the company in 2008 and was assigned to the Glass Research Center in Matsusaka [(now the Fundamental Chemical Research Center (Matsusaka)], where I have been involved in the research and development of low-E glass products, known as eco-glass for many years. I was then transferred to the New-STEP Research Center in Kawagoe, where I am currently working daily on cell sheet development.

Eco-glass is a type of glass that offers superior thermal and insulating properties and a low environmental impact, and its production requires advanced surface treatment and material development technologies. Our current cell sheet development is broken down into two major technological fields. One is the technology to culture cells obtained from harvested tissue and mass-produce cell sheets, and the other is research and development of substrates for cell sheet production.

My involvement with glass surface treatment technology led me to the realization that it could also be applied to cell sheet research, which is how I got my foot in the door of this field.

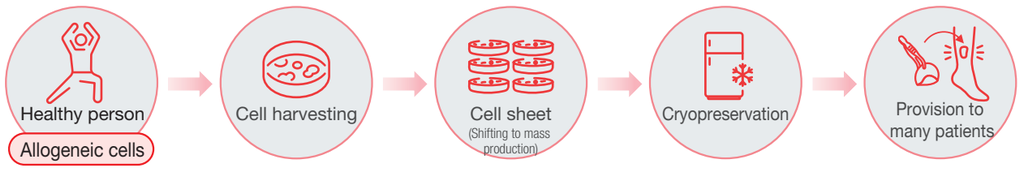
Mass Production of Cell Sheets That Can Be Preserved From Living Cells

In short, cell sheet transplantation is a regenerative medicine technology that promotes tissue regeneration by applying cultured cells in sheet form directly to the affected area. The current mainstream of cell sheet transplantation is to culture one's own cells, process them into sheets, and use them for one's own treatment.

However, using one's own cells requires more time for cell culturing and is more expensive because of its custom nature. In addition, it may not be possible to obtain healthy cells from patients who were ill in the first place. Therefore, we are developing a product that can be used immediately when needed by mass-producing and cryopreserving cell sheets in advance, using allogeneic cells donated by healthy people. Although the technological hurdle to reach the freezing of cell sheets will be very high, we believe that the development of this technology will make it possible to provide more rapid and stable treatment, and will contribute greatly to the spread of regenerative medicine.

The development of substrates is very important to reach our goal of producing cell sheets. Cells can be grown on these substrates to form sheets, which must maintain a high cell viability rate after cryopreservation to smoothly transplant to the affected area. While working to develop substrates, I realized that my previous research on eco-glass and development of cell sheet substrates had some technical similarities. In particular, I feel that I was able to apply the knowledge I gained through the development of eco-glass in surface treatment technology, evaluation methods, and other areas. Despite these existing in different fields, I was able to accelerate substrate development because of the shared approaches in some essential aspects.

Cryopreserved allogeneic fibroblast cell sheets



Growth Factors Secreted From the Cell Sheet Stimulate Regeneration of Damaged Tissue

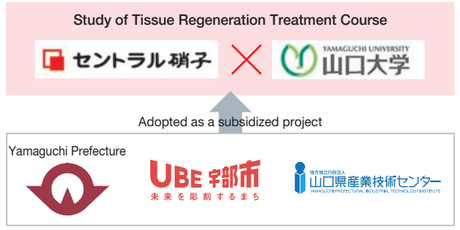
We are considering applying these cell sheets to intractable skin ulcers and postoperative tissue reconstruction.

We believe that by applying a cell sheet to the area to be treated, the growth factors secreted from the cells will act on the surrounding cells, activating the cells in the affected area and stimulating regeneration.

For example, even a small intractable skin ulcer can worsen, potentially leading to the need for amputation in the worst cases. Our goal is to make cell sheets not only an effective means of treatment, but also a product that can contribute to improving the quality of life of patients. Our intended first use of cell sheets under development is the treatment of intractable skin ulcers. As a next step, we are also looking at applying cell sheets to post-operative tissue reconstruction, and hope to make it a product that can meet a wider range of medical needs.

Industry-Academia-Government Collaboration and Joint Development With Yamaguchi University

We are jointly engaged in cell sheet development between the Yamaguchi University Faculty of Medicine and Health Sciences and the New-STEP Research Center. Another major technology for advancing cell sheet research is culturing cells obtained from harvested tissue and mass-producing them as cell sheets. Yamaguchi University's Faculty of Medicine and Health Sciences provided us with guidance regarding cell culture technology, something we had not handled before. Currently, we are mainly in charge of cell culture, cryopreservation, and other processes along with substrate development, while Yamaguchi University is in charge of processes from tissue collection to cell bank creation and verification of healing effects.



This research has been subsidized by Yamaguchi Prefecture and Ube City, making it a true industry-academia-government project.

Yamaguchi University has advanced to the stage of verifying therapeutic effects through animal testing, but in order to actually use the product in humans, it must be of stable quality and made in a well-controlled environment before it can be commercialized or even be eligible for clinical trials. For this reason, efforts are also underway to develop a system for clinical trials and commercialization, with the project moving forward in collaboration not only with the research team but also with other departments.

Curiosity and a Spirit of Challenge at the Heart of our R&D-Oriented Company

Recently, we have proclaimed that we will transition to an R&D-oriented company, and the creation of specialty products is a major theme in VISION 2030. As a researcher, I feel that our R&D system is steadily getting stronger. My research group is actively engaged in R&D to add new strengths to Central Glass's original strengths in fluorine chemistry. We are doing this by bringing together researchers with various specialties, such as organic synthesis, materials development, and biotechnology, in order to advance the life science and medical fields.

Within the New-STEP Research Center, various groups are conducting R&D on a wide variety of themes, but I think it is most important to take on a theme that interests you, regardless of which research project you are involved in. On the other hand, in order to achieve commercialization, I feel it is important to ensure that necessary studies are carried out without neglecting what may seem like simple tasks and fundamental experiments. While valuing this awareness and a sense of balance, we will steadily move forward as a team to commercialize cell sheets.

Addressing Social Issues With Innovative Technologies and Products as a Future-Focused R&D-Oriented Company

Central Glass is speeding up our transition to an R&D-oriented company, aiming to solve social issues with innovative technologies and products, guided by our Basic Philosophy, *Creating a Better Future Through* Monozukuri. We conduct R&D to help build a sustainable society by promoting comfortable living, protecting the global environment, and prioritizing health and safety. Additionally, we have an intellectual property strategy that leverages R&D results in our businesses.

Executive Managing Officer in charge of research **Satoru Narizuka**

Research and Development System Across Three Research Centers and Four Fields Leveraging Core Technologies

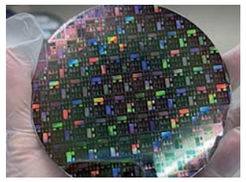
Since July 2022, we have been conducting new research and development through a three-laboratory system, consisting of the Fundamental Chemical Research Center, the Applied Chemical Research Center, and the New-STEP Research Center. Each lab has a defined role: creating fundamental technologies, developing functional materials efficiently, and carrying out corporate research.

In addition, VISION 2030, our long-term vision setting out goals for 2030, advocates that we will *Become a Specialty Materials Company*. In this vision, we aim to improve operating profit and ROE while contributing to the creation of a sustainable society through the growth of specialty products and the improvement of essential products.

In specialty products, we focus on four fields, including semiconductors and life sciences. To strengthen these functional materials businesses, we actively pursue joint research with major customers both in Japan and overseas, enhance collaboration with overseas research centers, and increase capital investment in analysis, evaluation equipment, and other facilities.

In February 2020, we established the Electronic Materials Research Center Taiwan (ERCT) as an R&D hub for front-end semiconductor materials and next-generation display materials. The center focuses on information gathering and developing new materials in the semiconductor and power semiconductor fields.

Electronic Materials Research Center Taiwan



ERCT fabricated patterned wafer

General Manager of Applied Chemical Research Center
Kazuhiro Yamanaka

General Manager of New-STEP Research Center
Satoru Miyazawa

General Manager of Fundamental Chemical Research Center
Yoshihiko Obara

Completion of the Functional Materials Laboratory

Functional Materials Laboratory

In order to further strengthen and accelerate R&D in the fields of electronic materials, energy materials, and life & healthcare, which are being conducted at the Applied Chemical Research Center and the New-STEP Research Center (Ube), the new Functional Materials Laboratory has been established as of April 2025.

In semiconductor-processing materials, we are focused on developing advanced and complex next-generation processing technologies. In the realm of next-generation power semiconductors, our primary focus is on manufacturing research using the SiC substrate material. In the field of electrolytes for lithium-ion batteries (LIBs), we explore ways to improve the manufacturing process of key raw materials to reduce costs and meet strong market demand. Additionally, we allocate research resources to develop other components beyond electrolytes and to create next-generation rechargeable batteries outside of LIBs.

Exploring Untapped Areas Through Open Innovation

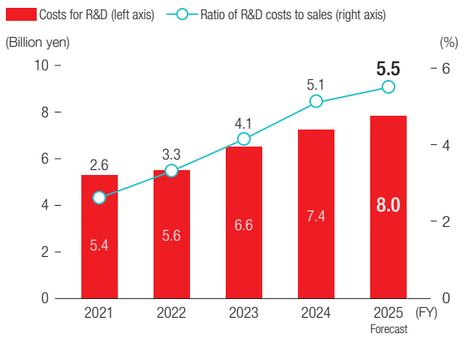
In corporate research, we leverage open innovation actively with universities and other institutions to broaden our business portfolio into unexplored areas. Specifically, we focus on regenerative medicine materials, medical device materials, and drug discovery in the life sciences field, as well as energy-saving and carbon-neutral fields that utilize the particle technology developed in our glass business. Regarding regenerative medicine materials, we have established a new joint research course within the Faculty of Medicine and Health Sciences at Yamaguchi University as of September 2024 to promote research and development on tissue regeneration, including cell sheets.

In addition, we are using particle technology to develop bonding materials for power semiconductors. Business divisions are collaborating to accelerate the commercialization of this technology. Furthermore, a research group focused on data science has been established within the New-STEP Research Center, and is engaged in efficient research and development using computational science, such as digitizing process data from production sites and incorporating it into computational science for use in process improvement.

R&D Expenses

We are also making significant investments in R&D, with R&D expenses for FY2024 totaling 7.39 billion yen, or 5.1% of net sales. We are strengthening R&D in the fields of semiconductors, batteries, environment and food, and new areas.

Costs for R&D/Ratio of R&D Costs to Sales



Trends in the Number of Research-Related Workers

FY	Total (as of 3/31)	Female	Percentage of Women	Total Number Compared to the Previous Year
2019	262	41	15.6%	-
2020	264	39	14.8%	101%
2021	252	35	13.9%	95%
2022	272	38	14.0%	108%
2023	291	45	15.5%	107%
2024	301	49	16.3%	103%
2025 (projection)	304	50	16.4%	101%

Electronic Materials

PFAS-Free ArF Immersion Resist

Many materials used in semiconductor manufacturing processes contain PFAS (perfluoroalkyl and polyfluoroalkyl substances), and in recent years there has been a demand for the development of new materials that do not use PFAS from an environmental impact perspective.

To meet these demands, we have been focusing on the development of environmentally friendly products, and have now succeeded in creating PFAS-free version of our photoacid generator and water repellent polymer ArF immersion resist materials. Going forward, we aim to develop and commercialize a PFAS-free ArF immersion resist utilizing these technologies.

To promote development, we signed a joint development agreement in October 2024 with imec, a world-class research institute in the field of semiconductor processing. This partnership will further accelerate the aforementioned PFAS-free ArF immersion resist.

Development status and results were presented alongside our future plans jointly with imec at SPIE Advanced Lithography + Patterning, one of the world's largest international conferences in the field of photolithography, held in the United States (San Jose, California) from February 23 to 27, 2025.

Feasibility of Replacing PFAS with Resist Materials (Summary)

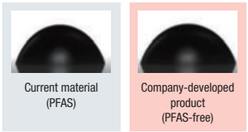
Resist Material	Function	PFAS Type	Possible PFAS Alternative	Difficulty
Surfactant	Improves photoresist coating uniformity	Long-chain PFAS	Alternative materials available	Low
Anti-reflective coating	Controls thin film interference effects	Water soluble fluoropolymer	Alternatives exist in theory	
Photoacid generator	Uses light to produce strong acid catalyst	C1 to C4 PFAS	ArF immersion resist difficult to replace	
Water repellent polymer	Protects resist and exposure systems from water	Water-insoluble, developing solution-soluble fluoropolymer	ArF immersion resist difficult to replace	High

Reference: SIA PFAS Consortium, "The Impact of a Potential PFAS Restriction on the Semiconductor Sector," 13th April 2023

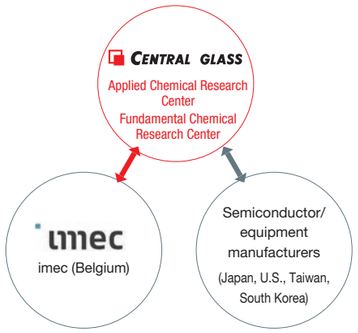
Developed PFAS-free material with performance equivalent to current resist material (PFAS)

Resist Material	Required Performance	Current PFAS	Company-Developed Material (PFAS-free)
Photoacid generator	Strong acid	✓	✓
Water repellent polymer	Water repelling	✓	✓
	Solubility in developing solution	Dissolves	Dissolves

Liquid repellency comparison (water contact angle)



Partnership System

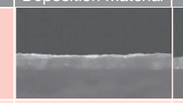
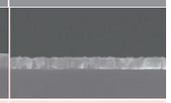


Etching Gas for Semiconductors (Launch of CEG® Series Mass Production)

Mass production of CEG® 34E began in August 2024 and of CEG® 39A in December 2024. CEG® 34E is a plasma etching gas developed for next-generation 3D NAND flash, an increasingly layered technology. This gas has the property of being able to specifically and linearly etch only the target highly layered film material while limiting etching damage to masks and photoresists. In addition, CEG® 39A is an etching gas adapted to the gate-all-around transistor structure for 2nm logic semiconductor generations and beyond, and has excellent etching performance (both processing accuracy and speed during etching). Both are also low-GWP gases, contributing significantly to the reduction of greenhouse gas emissions.

Next-Generation Mo Deposition Gas (CEG® F4M)

Until now, tungsten has been widely used as a wiring material for NAND, DRAM, and logic semiconductors, but as miniaturization progresses, scaling limits are becoming apparent, such as increased risk of device failure and reduced reliability due to increased wiring resistance. To address these technical issues, we are developing a molybdenum (Mo) deposition material, CEG® F4M, as a next-generation material that overcomes scaling limits from tungsten's use. CEG® F4M can be deposited at lower temperatures than conventional Mo deposition materials, and is notable for less contamination in the Mo film after deposition and higher electrical conductivity. As a result, this technology has received strong evaluations at international conferences as a technology that can contribute to improving the performance of next-generation devices, including those related to AI.

	Existing Mo Deposition Material	CEG® F4M
Film deposition characteristics		
Post-deposition impurities	Some (X compound detected in trace amounts)	✓
Electrical characteristics (Electrical conductivity)	1 S/m	3 S/m

Comparison of CEG® F4M with existing deposition materials

Power Semiconductors Field: SiC Wafers

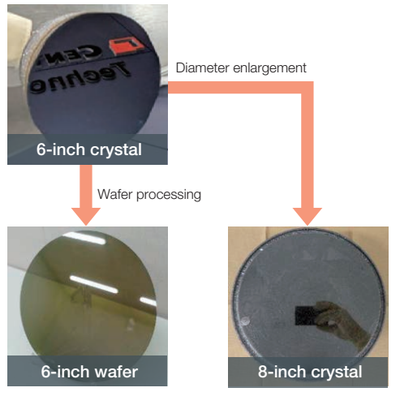
We aim to enter the SiC power semiconductor business using a new manufacturing technology known as the solution method. Currently, all SiC available on the market is produced using a method known as sublimation; however, the challenge lies in achieving both quality and cost-effectiveness. By contrast, the solution method produces crystals from the liquid phase, providing better quality and cost efficiency. If it can be commercialized, this method has the potential to outperform existing methods.

In the development of SiC substrate materials, we have set our sights on the production technology for 6-inch single-crystal wafers using the solution method, which allows for higher grades and longer lengths. Meanwhile, the NEDO public recruitment project Green Innovation Fund Project/Building Next-Generation Infrastructure selected our project for 8-inch single crystals, *Development of Manufacturing Technology for high-quality 8-inch SiC single crystals/wafers*, and we began our efforts in FY2022. The project passed the stage-gate review at the end of FY2023 and advanced from a NEDO-contracted project to a NEDO-subsidized project in FY2024.

With the transition to the Green Innovation Fund grant program, we accelerate the research and development of high-quality, cost-competitive 8-inch SiC single crystals using the solution method. We will achieve mass production of world-class high-quality 8-inch SiC wafers and contribute to the creation of a carbon-neutral society through their social implementation.

R&D Policy

Deepening proprietary solution method technology	• Balancing high quality and low cost • Large-diameter technology (8 inches)
Development of mass production technology using computational science	• Machine learning to determine optimal conditions • Process automation
Device testing of solution-method SiC wafers	• Standardization of solution-method SiCs • Utilization of the NEDO-GI Fund



Energy Materials

Stable Supply and Cost Reduction of Electrolytes for LIBs

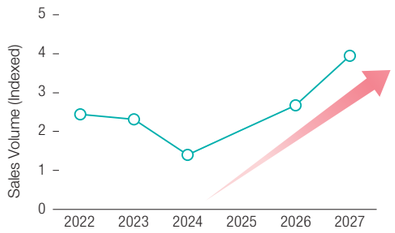
Although demand for lithium-ion batteries (LIBs) is not expected to increase significantly in the near term due to the stagnant EV market, demand for LIBs is expected to increase as the rate of electrification of automobiles (to EVs, PHEVs, and HEVs) steadily increases. Domestic automotive battery manufacturers are developing high-performance LIBs to meet future demand. Therefore, we are accelerating our own R&D to introduce new component electrolytes for LIBs. In addition, we aim to stabilize the electrolyte business by boosting electrolyte profit margin through an improved manufacturing process for key raw materials (electrolytes and additives).

Development of Electrolytes for SIBs

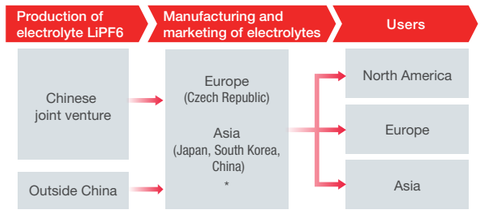
Sodium-ion batteries (SIBs) are rechargeable batteries gaining attention for their sustainability, as they use resource-abundant sodium salt as the primary electrolyte. We are preparing for the widespread adoption of SIBs by leveraging the technology we have developed for LIB electrolytes and focusing on improving the performance of electrolytes and additives for SIBs.

Phase 1 (FY2025 to FY2027) → **Phase 2** (FY2028 to FY2030)

Electrolyte Sales Volume Trend



The Group's Supply Chain



*U.S. supply system to be developed in accordance with customer demand

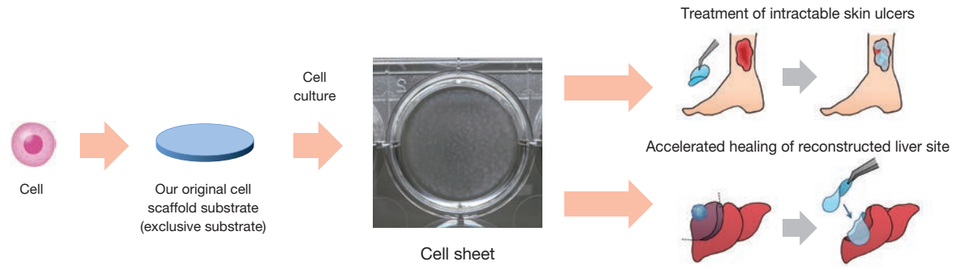
Life & Healthcare

Development of Regenerative Medical Products (Cell Sheets and Specialized Substrates)

Regenerative medicine and other products that process cells are gaining attention as new options for patients who are difficult to treat with conventional pharmaceuticals. As a challenge to an unexplored area, we have begun developing cryopreserved allogenic fibroblast cell sheets and specialized substrates. The cell sheet is characterized by a high cell survival rate after freezing and thawing. Transplanting the cell sheet into a patient facilitates tissue regeneration in the affected area, making it effective for treating intractable ulcers and facilitating tissue regeneration in surgical applications. By freezing and storing cell sheets made from allogenic cells of healthy individuals rather than the patient, we believe we can reduce production costs and significantly improve convenience by allowing for pre-manufacturing.

In June 2024, this research and development was selected for the FY2024 Yamaguchi prefectural subsidy program for the promotion of practical application and industrialization of regenerative medicine and the Ube city subsidy program for the promotion of advanced research and development and practical application of regenerative medicine. In September of the same year, we established a new joint research course at Yamaguchi University School of Medicine (course name: Department of Tissue Regeneration Medicine), and commenced full-scale joint research.

We continue to promote research and development by leveraging strong collaboration among industry, academia, and the public. Our goal is to achieve early commercialization of cell sheets in partnership with various related organizations.



Non-Plastic Coated Fertilizer

Coated fertilizers are labor-saving agricultural materials that make it possible to control the leaching of fertilizer components in accordance with crop growth. In recent years, however, the release of plastics used in the coating process into the environment has become an environmental issue. To solve this problem, we have been developing an environmentally friendly coated fertilizer that has the same slow-release effect without the use of plastics; the basic research has now been completed, and we have moved into development for mass production with a plan to launch this product in 2027. While the slow-release of the fertilizing component in this new product is equivalent to that of the existing plastic-based Cera-coat product, the coated shell that remains after leaching is now composed of a non-plastic, naturally occurring component that easily breaks down in the environment. Therefore, we believe that this is a product that can help solve the environmental issue mentioned above.

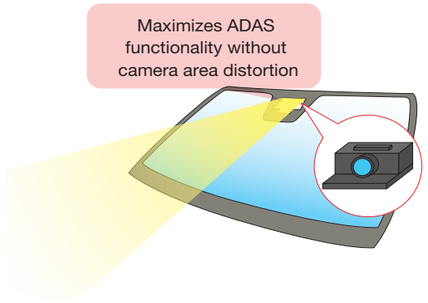
Coated fertilizer and coating shell breakdown in our newly-developed products

Glass

Automotive Window Glass

With advancements in automotive technology, automotive window glass must provide even higher levels of safety and convenience. We are developing glass for advanced driver assistance systems (ADAS) and next-generation heads-up displays by applying glass processing, optical control, and other technologies that we have developed over the years.

We are working toward rapid mass production and implementation of ADAS-compatible glass as a component that contributes to safe driving by eliminating optical distortion in the ADAS camera area on the windshield to maximize camera performance.



The Chemicals Production Engineering Center: Connecting Plants and Research Centers

Executive Managing Officer **Yuzuru Morino**
In charge of Chemicals Production Engineering Center and Ube Plant

Duties of the Chemicals Production Engineering Center	
New Value Creation	Conducts research, planning, technical development, and test production for the mass production of new products, and establishes production and utilization technologies.
Creation of Strong Business Models	Aims to establish efficient production technology processes by verifying and proposing new industrial technologies, investigating and examining new tools, and ensuring stable operation of tools.
Strengthening Profitability	Transfers technology from research centers to plants, but also provides feedback to research centers on customer needs, solves plant issues, promotes the use of digital technology to improve operational efficiency, and trains personnel who will be responsible for production technology.

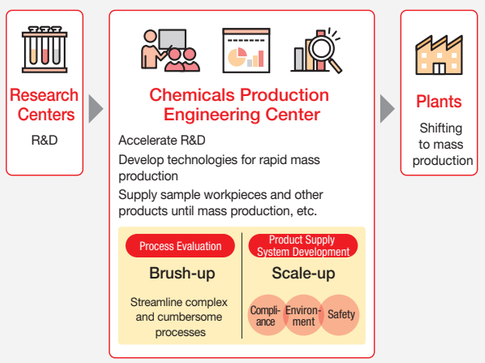
The Chemicals Production Engineering Center was established to engage in the new product development process as a chemical process development unit, developing technologies for the rapid mass production of developed products and supplying products including sample workpieces for mass production.

The center has a close relationship with our research centers and plants, and is responsible for the smooth transfer of technology from labs to plants for industrialization of new items, achieved through collaboration with each department in product development, mass production, technological development, and other areas.

We are also developing technologies to improve existing plant production processes and to reduce waste, thereby helping to reduce energy consumption from production activities, build a circular economy, and reduce environmental impact. Furthermore, we are innovating our production sites by incorporating cutting-edge technologies in areas such as automation, labor saving, and DX using AI and robotics.

The Chemicals Production Engineering Center will continue to work toward *Creating a Better Future Through* Monozukuri.

Chemicals Production Engineering Center

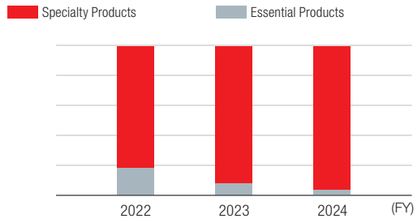


Chemicals Production Engineering Center
Role: Mass production of new products

Intellectual Property

Our Intellectual Property Department is focusing on acquiring specialty product-related IP rights in response to shifting our R&D structure to become an R&D-oriented company.

Share of Specialty Products in Patent Applications



The role of the Intellectual Property Department is to promote IP strategies with the aim of maximizing business earnings. This division acts in cooperation with our business and research divisions, focusing on the following two points.

(1) Aligning Our Application Strategy with the Business Strategy

We organize and visualize the status of our own and competitors' intellectual property rights through mapping and other methods. The three divisions then determine which IP rights to acquire based on business trends and R&D progress. The three divisions regularly discuss which IP rights to acquire and the progress toward acquisition, and determine the most appropriate IP rights to be acquired to build an optimal IP portfolio.

In BtoB, understanding downstream technologies in the commercial process is crucial. The research division enhances product evaluation systems and analytical technologies in support of this effort. The Intellectual Property Department collaborates with the research division to discuss these technologies from the perspective of acquiring IP rights. These discussions help secure IP rights that also incorporate downstream technologies.

(2) Preventing Infringement of Intellectual Property Rights

We carry out surveys to prevent infringing on other companies' intellectual property rights, using the results to support our R&D and business activities. We ensure respect for the intellectual property rights of other companies through Design Review/Stage Gate meetings. These meetings, involving the three divisions, are held in line with R&D and business activity progress.

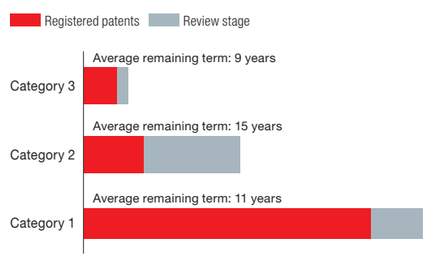
Status of Patent Portfolio

About 85% of the patents we hold are in the fields of electronic materials, energy materials, and life & healthcare, areas of particular focus in our R&D. We periodically review our patent portfolio to adapt to changes in the business environment.

Examples of IP Activities

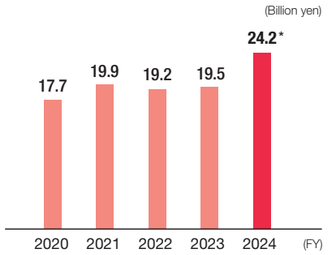
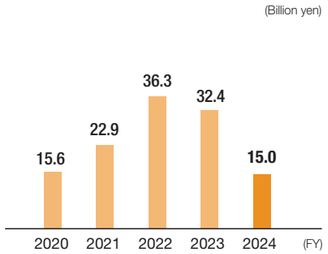
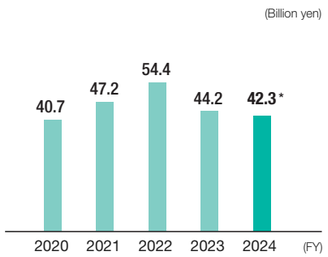
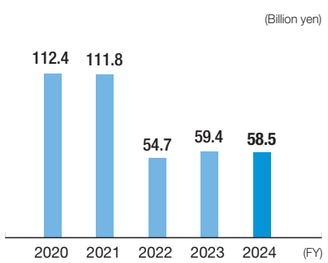
In the energy materials field, our strategies to achieve a V-shaped earnings recovery in the LIB electrolyte business in the final year of Phase 1 of the medium-term management plan are centered on acquiring important customers, acquiring OEM projects, and licensing additives. To support these business strategies, our IP division is working to acquire relevant IP rights and strengthen our portfolio. In particular, we are strategically applying for and obtaining patents related to additives at the commercial level (Category 1 below), next-generation additives (Category 2), and electrolyte production (Category 3). At present, Category 1 accounts for approximately 85% of registered patents, supporting business development utilizing intellectual property.

Going forward, we will further strengthen our efforts to acquire patents in Category 2 in order to attract new customers. When promoting OEM projects, in addition to production expertise, registered patents in key areas in Category 3 will be a source of competitiveness. We will work to optimize our portfolio of these patents, including their remaining terms.



New Medium-Term Management Plan and Segment Policies

At a Glance

Percentage of Net Sales by Segment	Net Sales	Business Overview Through FY2024	New Medium-Term Management Plan: Phase 1 (FY2025 - FY2027)	New Medium-Term Management Plan: Phase 2 (FY2028 - FY2030)	2030 Vision
Electronic Materials Segment Electronic Materials Business 16.8%		• The semiconductor market remained strong (and is expected to continue growing) • AI-related products saw rapid growth • Demand increased for environmentally friendly products, including low-GWP and PFAS-free products	**Basic Policy** • Strengthen competitiveness of existing products and enhance sales capabilities • Strengthen competitiveness in global markets **Basic Strategy and Measures** • Expand substitute products for items approaching market withdrawal • Maintain and expand share in Asian semiconductor markets (Taiwan, Korea) • Select and concentrate on strategic R&D areas	**Basic Policy** • Invest in growth and commercialize new products • Expand sales channel into global markets **Basic Strategy and Measures** • Invest in growth in environmentally adaptive new product businesses • Enter the U.S. market	**Focus on advanced semiconductor materials and power semiconductors** • Invest in growth in environmentally adaptive new product businesses • Launch new businesses in SiC wafers and PFAS-free resist products • Establish a semiconductor process gas manufacturing facility in the United States
Energy Materials Segment Energy Materials Business 10.4%		• Demand for electric vehicles varied by region • LIB market is shifting toward lower costs and greater commoditization • Demand growth in the U.S. and Japan for electric vehicles, which require high-performance electrolytes, is expected after 2028	**Basic Policy** • Acquire new customers by restructuring business model and investment plans (responding to customer and regional needs with appropriate volumes and prices) **Basic Strategy and Measures** • Maximize use of domestic and overseas supply chain capabilities - Japan: Expand capacity in line with customer needs - U.S.: Establish supply structure to meet customer requirements - Europe: Acquire OEM projects	**Basic Policy** • Build a strategic global value chain **Basic Strategy and Measures** • Operate businesses while maintaining high utilization rates of existing facilities • Build new supply systems in Japan and overseas (Investments aligned with electric vehicle adoption in Europe and the U.S.)	**Contribute to the environment through the EV electrolyte business** • Build a supply framework that can meet demand in expected growth markets • Deliver products that are both environmentally and economically profitable through region-specific optimization • Develop next-generation battery materials into a business
Life & Healthcare Segment Medi-Chemicals Business Applied Chemicals Business Fertilizers Business 29.3%		**Medi-Chemicals** • Global demand for inhalation anesthetics remained stable, but competition from generics intensified • New markets emerged in regenerative medicine	**Basic Strategy and Measures** • Maintain market share through strategic collaboration with customers • Research and develop cell sheets	**Basic Strategy and Measures** • Sustain market share through strategic collaboration with customers • Build a business framework for the commercialization of cell sheets	**Improve human health through APIs for inhalation anesthesia** • Maintain our position as a leading company in the supply of bulk APIs for inhalation anesthesia • Maintain sustainable profitability • Advance R&D into regenerative medicine fields
		Applied Chemicals • Markets for HFO products expanded • PFAS regulations drove market changes • Competition from manufacturers in emerging countries intensified	• Ensure stable supply and expand sales of existing products (e.g., blowing agent 1233E, solvent 1233Z, and functional fluorine products) • Restructure low-profit products (and businesses)	• Respond flexibly to PFAS regulations and expand profits through the launch of new products (fluorine products (flame retardants) and PFAS-free products (antistatic agents))	**Enhance fluorine technologies to expand next-generation high-performance products** • Expand HFO product sales • Develop and expand sales of functional material products • Target 18 billion yen in sales, mainly from growth of HFO products
		Fertilizers • Domestic suppliers announced plans to eliminate reliance on plastic-coated fertilizers by 2030, and demand for non-plastic fertilizer expected to increase	• Prepare for market introduction of non-plastic coated fertilizers (e.g., explore sample work, mass-production facilities)	• Mass-produce and expand sales of non-plastic coated fertilizers	**Solve social issues in agriculture through environmentally friendly coated fertilizers** • Contribute to sustainable agriculture (food security) by offering non-plastic-coated fertilizers that solve social issues • Secure stable profitability
Glass Segment Glass Business Glass Fiber Business 40.6%		**Glass** • Glass markets continued to decline in Japan • Raw material, logistics, and labor costs increased	**Basic Strategy and Measures** • Further strengthen and stabilize the business foundation, focusing on Japan (implement appropriate pricing policies, enhance profit management) • Accelerate development of high value-added products	**Basic Strategy and Measures** • Invest in growth • Launch high value-added products on the market (ADAS*1 -compatible glass, next-generation HUD*2, etc.) *1 ADAS: Advanced Driver-Assistance Systems *2 HUD: Head-up Display	**Focus on stable revenue contribution** • Contribute to stable revenue • Provide safe and secure products that are environmentally friendly and comfortable
		Glass Fiber • Sales of high-value-added glass fiber products grew, while demand for general-purpose products remained flat • Demand for glass wool used in automotive sound-absorbing materials remained solid	• Significantly expand production capacity of high value-added products in line with growing demand • Develop new applications for high value-added products	• Improve profitability through increased production of high value-added products	**Increase profitability and improve business value** • Double profitability • Establish an integrated, environmentally friendly structure from raw materials to manufacturing (Business sales target: 10 billion yen)

Other: 2.9% of net sales

*Beginning from FY2024, sales by FY2024, sales of SynQuest Laboratories, Inc. are included under Electronic Materials.

Business Strategies

Electronic Materials Segment
[Electronic Materials Business]

Flagship Products

High-purity gases for semiconductor processes, resist materials, and circuit pattern collapse prevention agents ("Pattern Keeper," "PK")

Business Objectives

Focus on advanced semiconductor materials and power semiconductors

2030 Vision

- Invest in growth in environmentally adaptive new product businesses
- Launch new businesses in SiC wafers and PFAS-free resist products
- Establish a semiconductor process gas manufacturing facility in the United States

Message From the Head of Business

Executive Officer, General Manager, Electronic Materials Sales Department
Tadayuki Kawashima

The Electronic Materials business considers advanced semiconductors and power semiconductors as growth businesses. We work to develop new products and expand global sales channels to achieve VISION 2030.

At the same time, we are expanding our lineup of environmentally adaptive products and advancing into new business domains. Our efforts here include strengthening the sales framework for new etching gases (CEG® Series) that meet needs for semiconductor miniaturization and higher integration. Another focus area is commercializing PFAS-free resists and 8-inch SiC wafers to address growing environmental demands, including GHG reduction and PFAS-free materials.

Business Environment and Strengths of the Group

Demand for AI drives rapid growth in the high-performance device market, including advanced logic and HBM DRAM. At the same time, demand for specialty gases used in general-purpose memory remains weak due to slowing growth for such memory. The semiconductor environment also remains uncertain as China tightens export controls on mineral resources. The Electronic Materials business will respond to market needs ahead of others by leveraging the strong collaboration framework our subordinate organization, the Electronic Materials Research Center Taiwan, has built with local semiconductor manufacturers.

Medium- to Long-Term Strategies Under the New Medium-Term Management Plan

Phase 1 of the new medium-term management plan focuses on strengthening sales capabilities for existing products and maintaining and expanding market share through local production in Asia (Taiwan and South Korea). Phase 2 emphasizes active investment in environmentally adaptive new products to broaden business domains. The Electronic Materials business also strives to build a gas product manufacturing base in the United States to capture North American market needs ahead of others and to strengthen our sales capabilities.

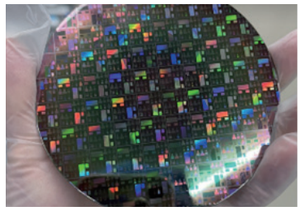
Priority Measures and Initiatives

Phase 1: Differentiate the quality of key gases for cryo-etching to achieve carbon-free operations and expand production facilities; strengthen sales capabilities for promising products through further facility expansion for CEG® 39A, which is effective in reducing GHG emissions, and other measures; strengthen sales capabilities; strengthen efforts to capture demand in Asian markets through the joint venture in South Korea and by building mass-production facilities for fluorinated gases in Taiwan

Phase 2: Commercialize PFAS-free resists and/or establish sales frameworks for related products and new products, including SiC wafers; assess customer needs and determine sites for a North American manufacturing base; finalize product lines

Major ESG Initiatives

The Electronic Materials business succeeded in developing PFAS-free photoacid generators and water-repellent polymers for ArF immersion resist materials. We presented these development results and future plans at SPIE Advanced Lithography + Patterning 2025, where we attracted significant attention. We also joined imec's Sustainable Semiconductor Technologies and Systems program last year. In this program, we work with other member companies to reduce CO_2 emissions and evaluate PFAS alternatives. Another area we focus is commercializing high-quality, low-cost 8-inch SiC wafers that contribute to a carbon-neutral society.



Business Strategies

Energy Materials Segment
[Energy Materials Business]

Flagship Products

Electrolytes and additives for lithium-ion batteries

Business Objectives

Contribute to the environment through the EV electrolyte business

2030 Vision

- Build a supply framework that can meet demand in expected growth markets
- Deliver products that are both environmentally and economically profitable through region-specific optimization
- Develop next-generation battery materials into a business

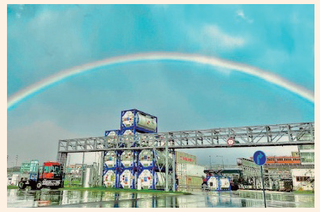
Message From the Head of Business

General Manager, Energy Materials Sales Department
Shigeo Kamiya

The lithium-ion batteries (LiBs) we manufacture and sell are used in electric vehicles (EVs) and other large applications. The Energy Materials business expects continued growth in EVs as adoption increases worldwide, though at different rates in each country. Against this backdrop, we will establish manufacturing bases in Japan, Asia, Europe, and the United States to adapt to customer needs and drive business expansion.

Business Environment and Strengths of the Group

Central Glass developed proprietary additives that improve battery lifespan and output. The Company also has expertise in developing electrolyte compositions suited to various LIB cell types, drawing on past experiences cultivated to date. Other strengths of the Company include our network of locations spanning Japan, South Korea, China, Europe, and the United States, and supply chains that ensure stability and cost-competitiveness within and outside of Japan. These strengths allow the Energy Materials business to propose optimal solutions for our customers in terms of both technology and price.



Medium- to Long-Term Strategies Under the New Medium-Term Management Plan

The Energy Materials business will establish supply frameworks based on customer demand in each region and implement appropriate sales measures in line with local business environments through FY2027. Our efforts for FY2028 and onward include maintaining appropriate sales policies in Japan, the United States, and other regions where growth is expected, while also exploring the commercialization of sodium-ion batteries and other new businesses.

Priority Measures and Initiatives

- Maximize use of our global supply framework and supply chains, invest in streamlining the supply framework in Japan, and build supply frameworks that meet customer needs
- Strengthen supply capacity further in Japan and overseas in anticipation of market growth after FY2028, establish appropriate production frameworks in each region, and enable flexible responses, including in terms of costs

Major ESG Initiatives

Electric vehicles powered by lithium-ion batteries do not emit CO_2 when operated and therefore contribute significantly to preventing global warming. One of the four main components of these lithium-ion batteries is the electrolyte. LiPF6 is a main raw material used in the manufacturing of Central Glass electrolytes. We manufacture LiPF6 at our group companies using low-cost, energy-saving processes based on our proprietary technology. Our manufacturing is completely environmentally friendly, from raw materials to production, transportation, and product applications.

Business Strategies

Life & Healthcare Segment [Medi-Chemicals Business]

Flagship Products

Chemicals for active pharmaceutical ingredients (APIs), including those for inhalation anesthesia, intermediates, and pharmaceuticals

Business Objectives

Improve human health through APIs for inhalation anesthesia

2030 Vision

- Maintain our position as a leading company in the supply of bulk APIs for inhalation anesthesia
- Maintain sustainable profitability
- Advance R&D into regenerative medicine fields

Message From the Head of Business

General Manger, Medi-Chemicals Sales Department
Koichi Miyauchi

Sevoflurane, our core API for inhaled anesthesia, is supplied to medical institutions worldwide through our pharmaceutical manufacturer customers. Medical professionals may not encounter our name directly, but we work behind the scenes to ensure a stable supply and support the health of countless people. Competition with generics grows more intense each year, but the Medi-Chemicals business focuses on quality and cost, and secures stable supply through our integrated production and sales model. In this way, we continue to contribute to society while also maintaining stable profitability and supporting the achievement of VISION 2030.

Business Environment and Strengths of the Group

Global demand for the inhalation anesthetic sevoflurane expands steadily, while competition for market share intensifies with the spread of generics. Our unique manufacturing process, founded in fluorine chemistry, allows for integrated production from hydrofluoric acid to active pharmaceutical ingredients under a rigorous quality control system. This process enables us to provide a stable supply of high-quality APIs and serves as a source of our competitiveness.

We have also begun R&D on regenerative medicine products in response to the market's rapid expansion in recent years, made possible by Central Glass's strength in providing an environment where we can continually take on new challenges.

Medium- to Long-Term Strategies Under the New Medium-Term Management Plan

Sevoflurane Business

- Maintain and expand sales volume through strategic partnerships with inhalation anesthetic manufacturers

New Products

- Target regenerative medicine and medical materials as the next fields, with the aim of launching new products

Priority Measures and Initiatives

Sevoflurane Business

- Ensure reliable and stable supply by complying with the latest GMP standards and pursuing continuous quality improvement
- Maintain sales volume amid the spread of generics through strategic partnerships with customers and implementation of key initiatives
- Sustain cost competitiveness and maximize profit by carrying out various cost-reduction measures

New Products

- Advance research, development, and commercialization of cryopreserved allogeneic fibroblast cell sheets, expected to be used in the treatment of refractory skin ulcers in surgical fields

Major ESG Initiatives

We are shifting domestic product transport from trucks to ships by using Ube Port, located next to the Ube Plant, in an effort to reduce CO_2 emissions. We conducted a trial shipment last fiscal year and plan to begin full-scale operation within FY2025. Other efforts include exploring the recovery and recycling of fluorine from waste liquid generated in the sevoflurane manufacturing process, and working to reduce waste.

Business Strategies

Life & Healthcare Segment [Applied Chemicals Business]

Flagship Products

Hydrofluoroolefin (HFO) products (blowing agents and solvents), fluorine-containing functional materials, and active ingredients and intermediates for agrochemicals

Business Objectives

Enhance fluorine technologies to expand next-generation high-performance products

2030 Vision

- Expand HFO product sales
- Develop and expand sales of functional material products
- Target 18 billion yen in sales, mainly from growth of HFO products

Message From the Head of Business

Executive Officer, General Manager, Applied Chemicals Sales Department
Masatomi Kanai

The Applied Chemicals business utilizes our core (fluorine) technologies to provide a wide range of products from blowing agents, solvents and functional materials, to active ingredients for agrochemicals. Our products support day-to-day life in numerous areas. Blowing agents are used in insulation materials for buildings and refrigerators, solvents are used to coat painless injection needles, and functional materials include electrolytes for primary batteries used in automotive fuel hoses and in water and gas meters. HFO blowing agents and solvents do not harm the ozone layer and have extremely low global warming potential (GWP), making them environmentally friendly products. The Applied Chemicals business will continue to provide environmentally friendly and safe products and drive business expansion through these efforts.

Business Environment and Strengths of the Group

We expect sales of blowing agent products to grow steadily as the construction market shows signs of recovery. Sales of HFO solvent products are also likely to see steady growth, driven by market demand for alternatives to regulated products. Markets for agrochemical and functional materials products remain stable, but price competition is intensifying as emerging companies from India and China enter the market. The Applied Chemicals business intends to compete by enhancing our long-accumulated fluorine technologies and developing new high value-added functional materials.

Medical Devices Coating Solvent: CELEFIN® 1233Z (HFO)

Medium- to Long-Term Strategies Under the New Medium-Term Management Plan

Our strategy for HFO products is to capture demand for energy-saving insulation in blowing agents, while securing replacement demand for solvents as alternatives to current-generation products and expanding sales overseas. We will also work to maintain and expand profitability in existing products, namely agrochemical intermediates and functional materials, by leveraging our joint venture in China. For new products, we will strive to drive development and expand profits.

Priority Measures and Initiatives

- Blowing agent products: Strengthen sales further by leveraging our strength in stable supply as the only manufacturer of HFO-1233zd(E) in Japan
- Solvent products: Expand applications and strengthen sales of CELEFIN® 1233Z (HFO), a product with high environmental and safety performance, focusing on replacing HFC, HFE, and brominated solvents
- Functional materials: Further reduce costs to compete with emerging market companies and develop markets for new products based on fluorine technologies

Major ESG Initiatives

We will offer a wide range of HFO products with extremely low global warming potential (GWP) to help solve global warming issues worldwide. The HFO-1233zd (E) blowing agent offers better insulation performance than conventional products, likely providing energy-saving effects. CELEFIN® 1233Z (HFO) for solvent applications is nonflammable and offers superior cleaning performance, meeting the needs of society to minimize fire risks at work-sites.

High-performance insulation materials for Net Zero Energy Building (ZEB)
Blowing agent for insulation materials: HFO-1233zd(E)

Business Strategies

Life & Healthcare Segment
[Fertilizers Business]

Central Chemical Co., Ltd.

Flagship Products

Coated fertilizer (Cera-coat R), NPK compound fertilizer, NK compound fertilizer, ammonium chloride, and mixed fertilizer

Business Objectives

Solve social issues in agriculture through environmentally friendly coated fertilizers

2030 Vision

- **Contribute to sustainable agriculture (food security) by offering non-plastic-coated fertilizers that solve social issues**
- **Secure stable profitability**

Message From the Head of Business

Growing concerns over political instability have brought food security into focus. In Japan, fertilizers were designated as a specified critical material in 2023.

Our product Cera-coat R, which supplies nutrients to crops at the right timing for growth, has become essential in Japanese agricultural production.

In 2024, we also succeeded in developing Non-Plastic Cera-Coat, a coated fertilizer that does not use plastic. We aim to bring Non-Plastic Cera-coat to market at an early stage to further help stabilize agricultural production and reduce environmental impact.

General Manager, Agri Business Administration Department
Norimichi Nitta
Representative Director and President, Central Chemical Co., Ltd.

Business Environment and Strengths of the Group

Central Glass manufactures chemical fertilizers (containing nitrogen, phosphoric acid, and potassium in a single granule) mainly for use as base fertilizers applied at the start of crop cultivation. We also produce NK compound fertilizers (nitrogen and potassium), which are applied additionally as crops grow. Customers value our fertilizers for their suitability with agricultural machinery. Our flagship product is Cera-coat R composite fertilizer, a single application base fertilizer* that blends Cera-coat R (containing a biomass content of 45–55%) with chemical fertilizer. Looking ahead, the Fertilizer business will introduce new products that further reduce environmental impact.

* A fertilizer designed for crops that usually require multiple applications, but can be applied just once at the beginning of crop cultivation.

Medium- to Long-Term Strategies Under the New Medium-Term Management Plan

Awareness of Solving Social Issues in Agriculture

- Developed Non-Plastic Cera-coat, a plastic-free coated fertilizer, using proprietary technology; focusing on establishing mass-production technology
- Planning to introduce mass-production facilities for Non-Plastic Cera-coat to launch in 2027
- Will explore overseas expansion after evaluating market results in Japan

Priority Measures and Initiatives

- Launch Cera-coat RS (a coated fertilizer with a lower plastic content than the current Cera-coat R) in 2025
- Aim to launch Non-Plastic Cera-coat in 2027, following field elution tests in 2025 and cultivation tests in 2026
- Develop new fertilizers for existing product lines that utilize unused resources, including incineration ash

Major ESG Initiatives

Central Glass obtained the Biomass Mark, which is also found on convenience store plastic bags. For our flagship product, Cera-coat, we indicate the percentage of plant oil used as a coating material on each update of the fertilizer packaging. For shipments to distant customers, we are shifting transport from trucks to ships to reduce GHG emissions. Other efforts include reusing resources by partially recycling fertilizer bags and inner bags for flexible containers.

Business Strategies

Glass Segment
[Glass Business]

Central Glass Products Co., Ltd.

Flagship Products

Architectural glass (eco-glass, disaster prevention safety glass, tempered glass, mirrors, etc.)
Automotive glass (windshields, door glass, rear windows, sunroof windows, etc.)

Business Objectives

Focus on stable revenue contribution

2030 Vision

- **Stable revenue contribution**
- **Provide safe and secure products that are environmentally friendly and comfortable**

Message From the President

Central Glass Products takes earnest measures to address environmental issues of growing global concern. We strive to provide products and services that lead to a comfortable future, based on the glass manufacturing technology and wealth of experience the Glass business has accumulated over the years.

We will continue to improve operations and production technologies through the use of digital transformation (DX), while proactively taking on challenges to address environmental issues. Central Glass Products aims to achieve sustainable growth and fulfill our corporate responsibility to help create a sustainable society. We do this by creating rewarding work environments and earning customer trust through safe and reliable products.

Executive Managing Officer
Masaaki Kawase
Representative Director and President, Central Glass Products Co., Ltd.

Business Environment and Strengths of the Group

Our strengths lie in an integrated production system that spans from flat glass to automotive and architectural glass products, and in technology development capabilities grounded in customer trust. Leveraging these strengths, the Glass business provides environmentally friendly, high value-added products.

At the same time, we face challenges from GHG emissions reductions, rising energy costs, and a shrinking domestic market, which demand stronger adaptability to the business environment. The Central Glass Group faces these challenges earnestly, working to create long-term value through business activities that leverage Group strengths.

Strengths of the Architectural Glass Business

- Development and expansion of eco-glass, which helps conserves energy and will continue to be in strong demand
- Reputation as a top mirror brand, backed by advanced manufacturing technologies and unmatched commercialization of high-performance mirrors

Strengths of the Automotive Glass Business

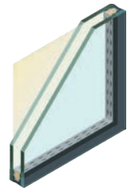
- Development of automotive glass compatible with advanced driver-assistance systems (ADAS)
- Provision of high value-added glass that supports improved fuel efficiency

Medium- to Long-Term Strategies Under the New Medium-Term Management Plan

- Operate business focused on cash flow and profitability
- Take on the challenge to develop specialty products that meet market needs and contribute to the environment
- Ensure implementation of our roadmap to carbon neutrality
- Streamline the plan to produce glass furnaces by optimizing the entire plan
- Reinforce the management of quality, environment, and supply chain
- Cut costs through business improvements utilizing information technology (IT) and DX

Priority Measures and Initiatives

- Implement a future-oriented human resources strategy (recruitment, human resource education, evaluation systems, creation of fun, comfortable workplaces)
- Implement sales strategies that minimize costs based on production capacity and pass on inflationary costs of raw materials and fuel to prices
- Utilize IT and DX to enhance operational efficiency and visibility
- Develop and promote sales of new high value-added products (eco-glass, etc.)
- Explore proactive capital investment based on business strategy



Eco-glass

Automotive glass (door glass)

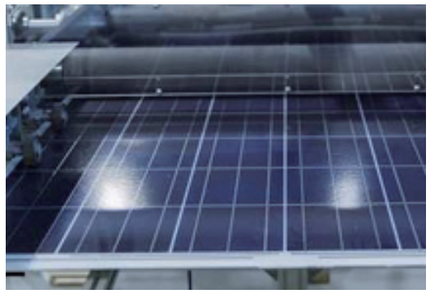
Major ESG Initiatives

We make active efforts to reduce greenhouse gas (GHG) emissions in the Glass business, aiming to achieve the Central Glass Group 2030 GHG emissions target of a 60% reduction in emissions compared to FY2013 levels.

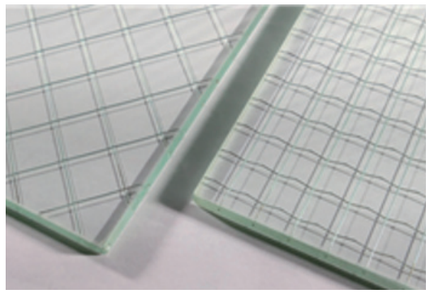
Initiatives

(1) Introduce renewable energy	Began converting a portion of electricity purchased from electric power suppliers to CO_2 -free electricity in FY2023
(2) Purchase J-Credits	Purchased CO_2 credits issued by the Matsusaka City government to support forest conservation
(3) Recycle cover glass used in solar panels	Started recycling cover glass used in solar panels by separating glass from end-of-life solar panels classified as industrial waste, and reusing this glass as raw glass material to reduce waste disposal and the use of virgin natural resources

* Refer to pages 53 and 57 for details on (2) and (3)



Solar panel (with cover glass)



Product glass (partly made using recycled glass)

We also pursue initiatives to obtain various official certifications (e.g., Kurumin certification), aiming to create workplaces where employees are proud to work for Central Glass Products and to build trust with local communities.

The Glass business will continue advancing initiatives to help create a sustainable society.

We constructed a new head office building in March 2025 to create a more comfortable work environment for group members.

Glass Segment
[Glass Fiber Business]

Central Glass Fiber Co., Ltd.

Flagship Products

Roving, chopped strand, chopped strand mat, milled fiber, glass cord for rubber reinforcement, glass wool for vehicles

Business Objectives

Increase profitability and improve business value

2030 Vision

- **Double profitability**
- **Establish an integrated, environmentally friendly structure from raw materials to manufacturing**
- **10 billion yen sales target**

Message From the Head of Business

General Manager, Glass Fiber Business Administration Department
Toshihiro Fujita
Representative Director and President, Central Glass Fiber Co., Ltd.

Central Glass Fiber manages the Glass Fiber business, operating two divisions: the long fiber (glass fiber) division and the glass wool division. We have maintained stable business operations for more than half a century by receiving support from customers and suppliers in diverse industries and providing high value-added products that meet individual needs.

Glass fiber is mainly used as a composite material, so it is not often seen directly. But group members take pride in providing this essential material that supports society. Central Glass Fiber will continue to reduce GHG emissions and enhance raw material recycling rates, while aiming to strengthen profitability by expanding production of high value-added products.

Business Environment and Strengths of the Group

The glass fiber division faces a sluggish recovery in electronic materials, the primary use of glass fiber. However, we expect higher sales of priority products, supported by the recovery in electronic materials that began in the second half of FY2024, steady demand in automotive products, and our strength in differentiated expansion into niche areas.

The glass wool division is seeing automaker production plans trend upward compared with the previous year. We expect shipments of Central Glass products to remain steady despite concerns over the impact of U.S. tariffs.

We will focus on expanding into the automotive soundproofing materials sector, where we hold a large market share, intending to strengthen our business structure further.

Medium- to Long-Term Strategies Under the New Medium-Term Management Plan

Glass Fiber Division

We will review our product portfolio to respond to changes in demand structure, while aiming to generate sustainable profits through appropriate investment in high value-added products. We will also strengthen earnings power through active expansion into growth areas, including automotive-related fields, and by reinforcing supply systems for rubber-coated glass cord and other priority products.

Glass Wool Division

We will focus on capturing rising demand for automotive soundproofing materials as vehicle noise regulations tighten, expanding order-taking for EV components, and developing new products. We will also maintain stable supply systems and business operations by appropriately passing on rising costs in labor and other areas, while at the same time reducing costs through automation and other measures.

Priority Measures and Initiatives

Glass Fiber Division

- Expand sales of priority products for electronic materials
- Drive new development themes and acquire new customers through stronger R&D and development-oriented sales
- Strengthen supply systems for high value-added products
- Enhance productivity and reinforce cost reduction initiatives

Glass Wool Division

- Capture new demand and expand sales of high value-added products
- Develop and expand applications for new EV-related products
- Implement environmental measures and strengthen recycling initiatives
- Advance digital transformation to reduce costs and improve quality

Major ESG Initiatives

The Glass Fiber business is building a circular model by establishing recycling technology for offcuts of glass wool products used in automotive soundproofing materials. The business also addresses environmental needs through materials development. In addition, Central Glass Fiber acquired Kurumin certification from the Ministry of Health, Labour and Welfare in recognition of our comfortable workplace that supports employees raising children.

Sustainability Management

Basic Concept

The Group engages in efforts to solve environmental and social issues based on our Management Philosophy of *Creating a Better Future Through* Monozukuri, developing various businesses to help create a truly affluent society. This Basic Philosophy represents the very essence of our approach to sustainability. We are committed to addressing environmental and social issues more seriously than ever through *Monozukuri*, helping to create a truly affluent society.

Central Glass aims to improve corporate value over the long term through business activities that consider the global environment, society, and economy.

Vision

The Group revised our original Basic Policy into what we now call our Purpose as a guideline for sustainable growth. This Purpose redefines our role and significance in society. We also formulated our long-term vision, VISION 2030, which will guide us through the year 2030. We set forth our aspirations in VISION 2030 to *Become a Specialty Materials Company contributing to the realization of a sustainable society*.

We will unite our companies to become a corporate group that continues to create and provide valuable materials to serve our purpose in creating a sustainable society.

Policies

The Group identifies materialities that reflect our corporate philosophy, medium-term management plan, stakeholder expectations, and other factors, taking into consideration the business environment surrounding the Group and our basic approach to sustainability. We create economic and social value through our efforts to solve such issues through our business activities.

We set medium- and long-term initiatives and targets which we pursue through the PDCA cycle under the supervision of the Board of Directors.

Promotion Framework

We established the Sustainability Committee to further strengthen Group sustainability initiatives by analyzing and evaluating such initiatives and activities across the organization. The committee then reports and makes recommendations to the Board of Directors as necessary. The committee meets as necessary to centralize sustainability-related initiatives, analyze and evaluate plans and implementation status, and discuss, analyze, and evaluate sustainability-related issues.

Main Objectives	(1) Gain a comprehensive understanding of Group sustainability activities (2) Analyze and verify sustainability-related initiative contributions from a broad perspective (3) Make recommendations to management as necessary to resolve social issues
Composition	Chairperson: Executive in charge of the Corporate Communications Dept. Vice-Chairperson: Executive in charge of the Corporate Administration Dept. and the Environment and Safety Dept. Committee Members: Designated responsible persons of each department Secretariat: Corporate Administration Dept., Corporate Communications Dept., and Environment and Safety Dept.

Addressing Climate Change

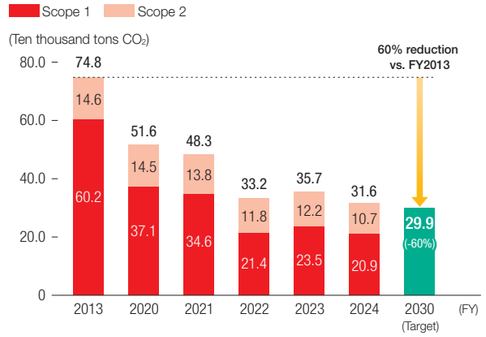
Carbon Neutrality Initiatives

The Central Glass Group takes active initiatives to reduce environmental impact, including reducing greenhouse gas (GHG) emissions. Our efforts have included conserving energy, switching fuels, and other efforts to mitigate climate change. Regarding the Group's GHG emissions reductions for Scope 1 and 2, we have set a long-term goal of carbon neutrality by 2050 and an interim goal of reduction of at least 60% from the FY2013 level by FY2030.

FY2024 emissions in Scope 1 and 2 totaled 316,000 t-CO_2 due to factors such as changes in the production mix for chemicals. Emissions totaled 748,000 t-CO_2 after structural adjustment, which excludes emissions from transferred European and U.S. Automotive Glass business, etc. from the FY2013 emissions results, a 57.8% reduction in FY2024 emissions versus FY2013.

The Group has been undergoing third-party verification of Scope 1 and 2 GHG emissions since FY2024, and will continue efforts to reduce GHG emissions and environmental impact, while striving to make highly reliable information disclosure.

GHG Emissions



Participation in the GX League

Since FY2024, the Central Glass Group has participated in the GX League of the Ministry of Economy, Trade and Industry to help Japan achieve carbon neutrality by 2050. We also announced and began participating in the GX-ETS (Emission Trading Scheme), a voluntary emissions trading scheme in the GX League to begin full operations in FY2026. The Group will take these initiatives as opportunities to both reduce GHG emissions and achieve sustainable growth.

CDP Score

The Company received a B rating from CDP, a non-profit organization that operates an independent environmental disclosure system, in the area of Climate Change, an increase of one level from last year's rating. Improvement in the FY2024 survey results came from the upward revision of GHG emission reduction targets and the enhancement of disclosed data, which led to an improved evaluation.

We will continue our consistent and transparent efforts to respond to diverse stakeholder demands in environmental fields and implement efforts to reduce our negative environmental impacts.

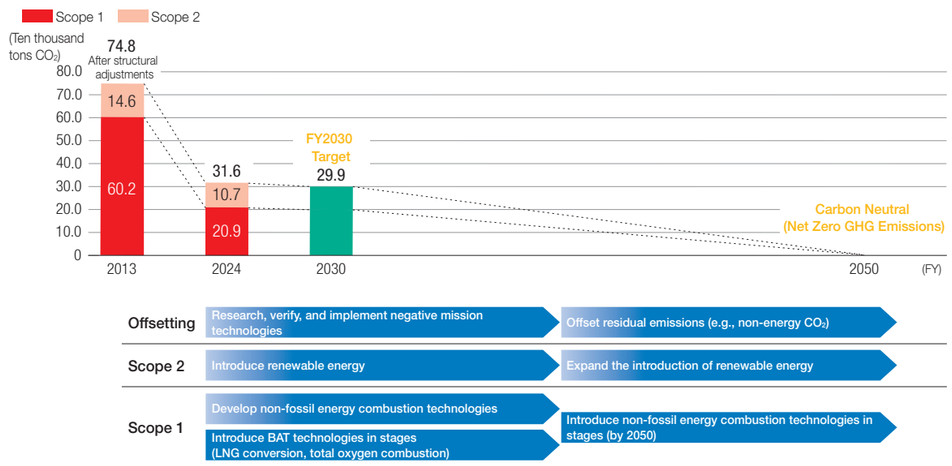
Roadmap to Carbon Neutrality

We regularly review and update the roadmap toward carbon neutrality in 2050. Specific measures to reduce Scope 1 emissions include the phased introduction of best available technology (BAT), including fuel conversion and total oxygen combustion in glass kilns. As a specific example of our efforts to reduce GHG emissions, in January 2023, we introduced oxygen combustion technology in the glass kilns manufacturing glass fibers, successfully reducing our use of heavy oil by about 40%. The reduction in heavy fuel oil consumption has led to a reduction in annual GHG emissions of approximately 4,000 t-CO_2. We are planning to further reduce GHG emissions in the glass fiber kiln through fuel conversion from heavy oil to city gas and other measures. As we further expand the introduction of BAT in the future, we will utilize the internal carbon pricing (ICP) system, introduced in June 2023, to screen GHG reduction investments based on the recognition of an internal carbon price of 10,000 yen/t-CO_2 as an environmental value. Furthermore, we will pursue technological development and other measures due to the necessity of adopting combustion technology powered by non-fossil fuels for reaching carbon neutrality by 2050.

In addition, since specific measures to reduce Scope 2 will require the introduction of renewable energy, we are investigating various options, including the purchase of electricity derived from renewable energy sources. At some of our business locations, we have started to introduce renewable energy electricity plans from April 2023 to reduce Scope 2 emissions.

On the other hand, glass production uses soda ash, limestone, and other carbonate raw materials generating CO_2 during vitrification. This CO_2 from carbonate raw materials, known as non-energy-derived CO_2, remains an unavoidable GHG emission, even if the energy source is fully converted to non-fossil fuels. Therefore, we have begun exploring negative emission technologies to offset our non-energy-derived CO_2 emissions to achieve carbon neutrality by 2050. There are various technologies available to achieve negative emissions. We will take the initiative to verify and implement various negative emission technologies, after thoroughly assessing their maturity, offset costs, and quantitative offset potential.

Roadmap to Carbon Neutrality



Disclosures Based on TCFD Recommendations

The Group views addressing climate change issues as one of our materialities. To this end, we address climate change impacts on our business in accordance with the Task Force on Climate-related Financial Disclosures (TCFD) framework. We are committed to our efforts to reduce GHG emissions and address other climate change-related initiatives while gradually expanding our disclosures to enhance corporate value.

Governance

The Management Committee serves as the decision-making body for business execution, discussing and approving initiatives to address climate change and other environmental and social issues in the Group. We also established the Sustainability Committee to analyze and evaluate our efforts to address each issue across the organization. This committee also discusses individual policies and measures as necessary, reporting and proposing the discussion results to the Board of Directors as appropriate. The Board of Directors discusses and supervises Group responses to environmental issues, our progress, and other areas in response to discussions and recommendations made by the Management and Sustainability Committees.

Strategies

The Group has taken the following initiatives to understand the impact of climate-related risks and opportunities on our business and has announced their results.

- Identify climate-related risks and opportunities
- Assess impact, period, and likelihood of occurrence for each risk and opportunity

▶ https://www.cgc-jp.com/sustainability/environment.html

We have conducted a new quantitative assessment of the identified risks and opportunities that can be modeled to estimate financial impact, and have examined and organized our response strategies based on this assessment.

Transition risks refer to risks associated with the transition to a low-carbon society. We quantitatively assessed these by aggregating the increased operating costs associated with higher carbon prices.

Physical risks refer to risks associated with natural disasters directly caused by climate change. We recently conducted hazard screening (river flooding, inland water flooding, storm surge, water stress, heat waves, and sediment disasters) to identify potential risks due to climate change at our group's major business locations, and conducted a quantitative assessment to estimate the financial impact on locations assessed as having a certain level of flooding hazard.

Climate-related opportunities refer to business opportunities presented by addressing climate change and the transition to a low-carbon society. We quantitatively assessed the increased revenue opportunities from the growing demand for the products our group sells that contribute to decarbonization.

The results of the quantitative assessment of the above risk and opportunity items and the relationship between the response strategies and indicators and targets based on these results are shown in the table on page 52.

Introducing an Internal Carbon Pricing System

The Central Glass Group introduced an ICP system in June 2023 as part of our efforts to achieve our GHG emissions (Scope 1 and Scope 2) reduction targets. This system uses an internal carbon price to visualize carbon costs for use in capital investment decision-making. We are committed to investing in reducing emissions to meet the growing demand for GHG reductions.

Reference: Internal carbon price (at introduction) of 10,000 yen/t-CO_2

Impacts of Climate-Related Risks and Opportunities

Key Risks and Opportunities			Scenario	Financial Impacts		Response Strategies	Indicators and Targets
				2030	2050		
Risks	Transition	Increase in operating costs due to higher carbon prices	NZE*1 (1.5°C)	Approx. 6.1 billion yen*3 (increase in costs)	Approx. 7.2 billion yen*3 (increase in costs)	• Make strategic decarbonization investments • Improve energy use efficiency • Expand use of renewable energy • Use ICP in investment decisions	By FY2030, 60% reduction in Scope 1 and 2 (vs. FY2013) By FY2050, net-zero in Scope 1 and 2
Risks	Physical	Damage and loss of sales opportunities due to damage to the Company's factories caused by typhoons, flooding, etc.	RCP8.5*2 (4°C)	Negligible	Less than 0.1 billion yen*4	Minimize damage and ensure business continuity in the event of a large-scale disaster	—
Opportunities		Expanded revenue opportunities through increased demand for products that contribute to decarbonization (low-GWP/ energy-efficient products)	NZE*1 (1.5°C)	Approx. 87.0 billion yen*5 (increase in sales)	Not assessed	• Expand sales of products that contribute to decarbonization • Strengthen R&D	GHG emissions avoided by providing environmentally friendly products*6 5,800,000 t-CO_2 (FY2027)

*1 Scenario to achieve net zero emissions (NZE) by 2050: Standard scenario to stabilize global average temperature at 1.5°C above pre-industrial levels.
*2 Scenario corresponding to maximum greenhouse gas emissions in 2100.
*3 Calculated based on US$140/t-$CO_2$ (2030) and US$250/t-$CO_2$ (2050) for developed countries and estimated emissions at each future point in time (Scope 1 and 2). Calculations are on a consolidated basis.
*4 Financial impact of climate change on flood damage due to river flooding and storm surges. (Reference value) Cumulative amount for the period up to 2050: Approx. 200 million yen.
*5 Total increase in sales of products contributing to decarbonization (low-GWP refrigerants, low-GWP blowing agents, high-insulation glass, semiconductor process materials, and battery electrolytes for EVs).
*6 Based on the GHG emissions reduced at the use stage of the final products that use our environmentally friendly products. Avoided emissions are estimated using our unique formula to calculate reduced emissions through one year of use based on Company sales volume.

Risk Management

Each business unit identifies and assesses operational risks and impacts, reporting them to management as needed. The Sustainability Committee also shares, analyzes, and evaluates business risks, opportunities, and countermeasures related to climate change and other factors across the organization. The committee then reports and makes proposals to the Board of Directors as necessary.

We launched the target management framework for medium- to long-term GHG emission reduction in FY2023. This framework addresses Scope 1 and 2 emissions, striving to achieve our 2030 target and 2050 net zero GHG emissions target. We consider this framework important to our activities to reduce GHG emissions. The main initiatives of the framework include estimating future emissions, evaluating the possibility of achieving targets, formulating action plans to reduce emissions, and revising such plans as necessary.

Indicators and Targets

- Aim to reduce group-wide GHG emissions (Scope 1 and 2), including overseas companies, by 60% by FY2030 compared to FY2013 levels
- Aim for net zero GHG emissions by 2050

Emissions Results

FY2024 emissions totaled 316,000 t-CO_2 in Scope 1 and 2, a 57.8% reduction from FY2013 levels.

Medium- and Long-Term GHG Emission Targets

Category	Indicator	Scope	FY2030 Target	2050 Target
GHG emission reduction	Scope 1 and 2 emissions	Group + consolidated companies	60% reduction vs. FY2013*	Net zero emissions

*We revised our previous target upwards from a 40% reduction compared to FY2013 levels.

GHG Emissions Data (10,000 t-CO_2)

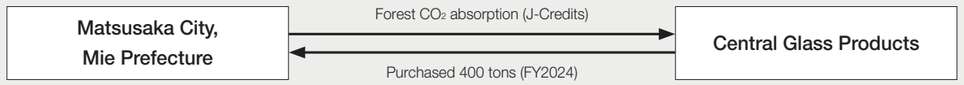
	2013*	2020	2021	2022	2023	2024	FY2030 Target
Scope 1	60.2	37.1	34.6	21.4	23.5	20.9	—
Scope 2	14.6	14.5	13.8	11.8	12.2	10.7	—
Scope 1 and 2	74.8	51.6	48.3	33.2	35.7	31.6	29.9
Reduction Ratio Compared to the Base Year	—	-31.0%	-35.4%	-55.6%	-52.3%	-57.8%	-60%

*The amount for the baseline year excludes the GHG emissions of the transferred European and U.S. automotive glass operations

The Central Glass Group intends to continue to enhance our climate-related disclosures.

Purchased 400 t-CO_2 of J-Credits at Central Glass Products

Central Glass Products (headquartered in Matsusaka City, Mie Prefecture) purchased the first J-Credits generated by the Forest Management Project for the Future, implemented by Matsusaka City to promote forest development there. The funds allocated for credit purchases will be used for further expansion of forest maintenance, creating a virtuous cycle of environmental conservation. The credits purchased by Central Glass Products will be used to offset the company's greenhouse gas emissions. In addition, forest absorption J-Credits have non-carbon value (e.g., landslide prevention function, contribution to local economy, biodiversity conservation, and water source recharge function) in addition to environmental value due to the reduction of greenhouse gas emissions from the baseline. Through the purchase of J-Credits for forest absorption systems, the Group hopes to contribute to the maintenance and enhancement of these value functions.



Water Source Recharge Function of Forests

● **Flood mitigation:** Forest soil stores precipitation and equalizes the amount of water flowing into rivers, thereby reducing flooding. This prevents sudden increases in water volume and reduces flood damage.

● **Water retention:** Forest soil absorbs water like a sponge and stores it as groundwater. This ensures a stable water supply even during dry periods.

● **Water purification:** As rainwater passes through forest soil, microorganisms and plant roots in the soil purify the water. This improves the water quality of rivers and groundwater.

The water source recharge function of forests is very important for our lives and the environment. In particular, flood mitigation and water purification serve to improve the quality of life in urban and rural areas.

Improvement of Energy Use Efficiency

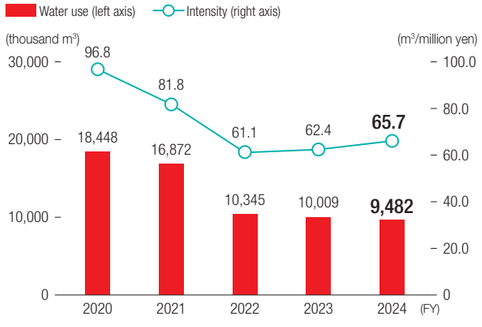
Improving Energy Use Efficiency

The Central Glass Group considers the efficient use of resources to be a materiality. We established short-term KPIs for water consumption and final disposal of industrial waste, working to reduce these levels.

Effective Use of Water Resources

The Group withdraws approximately 10 million m³ of water annually in the course of our business activities. Water is not only an important resource for the Group's business, but also a valuable resource for businesses and citizens throughout the intake area, and we consider the effective use and conservation of water quality to be our mission as a company. Water consumption in FY2024 was 9.48 million m³, an absolute decrease of 0.53 million m³ in water intake compared to the previous year. Water intake intensity per sales unit, which was set as a KPI for the previous medium-term management plan period, was 65.7 m³ per million yen, an increase compared to the previous year and failing to achieve our target. We will continue our efforts toward efficient use of water resources throughout the entire Group, and will promote initiatives with the goal of reducing water consumption by 3% from the FY2024 level by FY2027 as a new KPI.

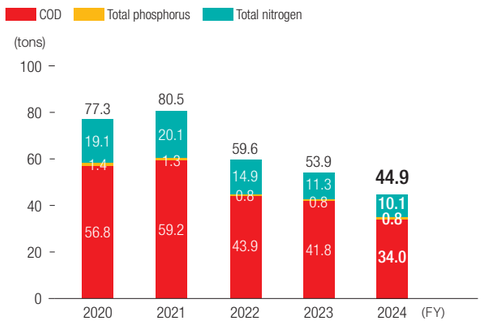
Water Consumption (Water Intake) and Intensity Per Sales



Water Pollutant Discharge

The Group monitors the concentration and discharge amounts of chemical oxygen demand (COD), total phosphorus, total nitrogen, and other water pollutants. We monitor such pollutants in compliance with the Water Pollution Control Act, laws and regulations of each country, and regional discharge standards where our facilities operate. We install wastewater treatment facilities at each plant to remove pollutants and recover active ingredients from wastewater before discharge into the environment. Our water pollutant discharge decreased in FY2024 from the previous year. We will continue to manage water pollutant discharge going forward.

Amount of Water Pollutant Discharge



Identification of Water-Related Risk Areas

In order for the Group to continue to use water resources sustainably in our operations, it is necessary to ensure that appropriate water use and discharge can be maintained into the future. Because the environmental impacts of water resource use and water pollution are highly regionally dependent, an assessment must be made for each of our business sites.

We use the Aqueduct Water Risk Atlas provided by the World Resources Institute (WRI) to identify water stress, drought, and other water-related risks for the Group's major production bases. No significant water-related risks have been detected at this time, but we will continue to assess risks on an ongoing basis.

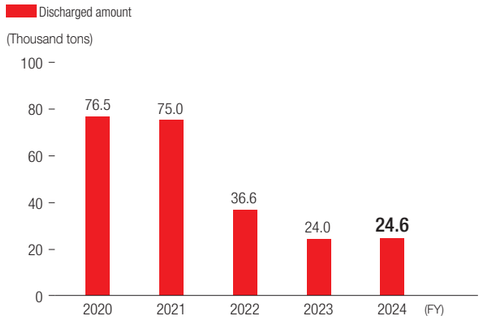
Reducing Waste

The Group engages in Responsible Care activities to implement the 3Rs (Reduce, Reuse, Recycle) further, striving to reduce industrial waste discharge while ensuring proper waste disposal management. Group industrial waste discharge increased slightly in FY2024 compared to FY2023. Amounts of waste recycled decreased compared to FY2023, and the final disposal amount increased, totaling 11.0 thousand tons.

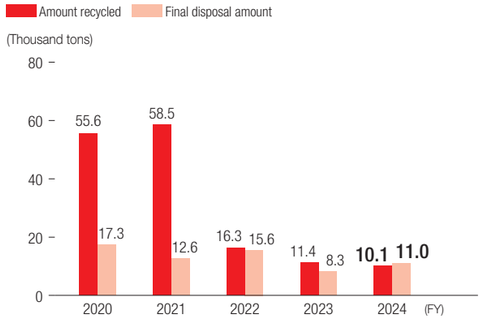
The Group is committed to reducing the volume of final disposal of industrial waste, with the goal of 15% reduction from the FY2020 level by FY2027.

The Group began aggregating industrial waste from products using plastic in FY2021 per the enforcement of the Plastic Resource Circulation Act (April 1, 2022). The amount of industrial waste from products using plastic in FY2024 increased from FY2023 levels. Waste recycled at destination processors increased from FY2023 and recycling rates rose. We will continue to implement initiatives to reduce and recycle industrial waste from products using plastic.

Amount of Industrial Waste Discharged



Industrial Waste Recycled/Final Disposed Amount



Industrial Waste From Products Using Plastic/Recycling Rate

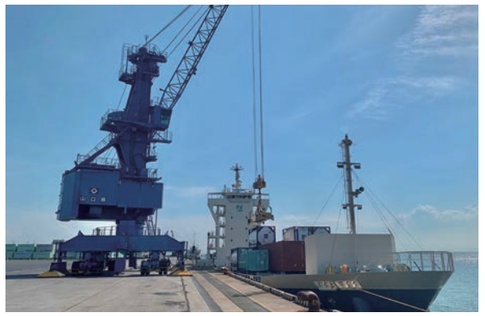
	FY2021	FY2022	FY2023	FY2024
Amount of industrial waste from products using plastics	1,218t	1,097t	1,094t	1,205t
Recycling rate	38%	46%	31%	70%

Modal Shift Initiatives

We must not only reduce CO_2 emissions but also implement modal shifts to use resources effectively and reduce adverse environmental impacts.

Central Glass has established a working group to improve logistics, which explores the use of less environmentally burdensome ships, instead of trucks and other vehicles, in the procurement of raw materials and the transportation of products. Using such environmentally friendly ships enables energy consumption reduction and enhances transportation efficiency. The sales departments, factories, and indirect departments work together to list and conduct trial logistics improvement measures to secure transportation means in logistics, reduce energy consumption, reduce adverse environmental impacts, and address concerns about cost increases.

In FY2024, we conducted trial transportation of exports of our core anesthesia APIs and semiconductor process gas products, and imports of raw materials from overseas, utilizing the Ube port in Yamaguchi Prefecture (adjacent to our Ube Plant), which is being promoted for use by the public and private sectors, to confirm the benefits of modal shift. Going forward, we will horizontally deploy the insights gained from trial transportation as part of our ongoing commitment to reduce the adverse environmental impact of our logistics operations and establish a sustainable logistics network.



Biodiversity Conservation Efforts

To contribute to the conservation of the global environment, the Group is actively involved in conservation and maintenance activities for local natural environments as part of our biodiversity-conscious activities. The Satoyama Biotope Futamatase, the first nature-symbiosis site certified in Yamaguchi Prefecture, is a biotope utilizing fallow rice paddies in the northern low-upland area of Ube City, where human settlements and natural features blend and environments of secondary forests, reservoirs, wetlands, and grasslands are maintained through continuous conservation activities. In addition to regularly hosting nature observation events, this area serves as a place for environmental studies by elementary schools and groups in and outside the city, as well as a place for residents to relax.

* A biotope is a place that hosts living creatures, and in recent years it has also been used as a name for places where people have toiled to maintain a natural ecosystem.

Transitioning to a Circular Economy

The Group uses fluorite, silica sand, and other natural resources in manufacturing our products. We strive to make effective use of the earth's limited resources, advance our existing 3Rs (Reduce, Reuse, Recycle) initiatives, reuse resources, and expand our use of recycled resources.

Specific examples of our efforts to use recycled resources include our use of fluorite recovered from the destruction of post-use fluorinated refrigerants as part of the raw materials for hydrogen fluoride production. We also began efforts to expand our use of cullet recovered after the use of various flat glass products, aiming to reduce the amount of natural silica sand used in glass production. We will explore using recycled raw materials in all phases of our business and implement initiatives aimed at building resource recycling cycles.

Recovering and Recycling Calcium Fluoride (Fluorite)

The Group applied our long-developed fluorochemical technologies to expand our business into fine chemicals, our current core business. Fluorite, the raw material for hydrogen fluoride, is a natural resource with limited production countries and reserves. To this end, Central Glass developed a recycling technology to recover fluorine as fluorite from fluorine-containing waste liquid discharged during manufacturing processes. We use part of this recovered fluorite as a raw material for our hydrogen fluoride, effectively using resources and reducing waste. We also applied our expertise in developing recycling technologies to begin using the fluorite generated from fluorine-containing waste liquids generated at our suppliers and other companies.

We will strive to achieve a circular economy through efforts to increase the ratio and amount of recycled fluorite used.

Recycling Cover Glass From Solar Panels

The service life of solar panels, the main source of renewable energy, is estimated to be 20 to 30 years, and several hundred thousand tons of used solar panels are expected to be disposed of annually in Japan starting in the late 2030s. Amid this disposal, recycling of cover glass, which accounts for more than 60% of the panel weight, is considered an important issue. We will utilize this cover glass from solar panels to be disposed of in large quantities as recycled cullet, turning it into raw materials for architectural glass produced by the Group. By doing this, we will contribute to reducing both final waste disposal volumes and use of virgin natural raw materials. By expanding the use of glass cullet, we will also reduce CO_2 emissions derived from carbonate raw materials such as soda ash and reduce GHG emissions in the raw material refining process and in the transportation process of raw materials from overseas. The Group will strive to realize a circular economy by actively promoting the use of glass cullet derived from used glass products (post-consumer cullet).

Participating in Circular Partners

Working with the relevant parties to broaden our areas of collaboration is essential to create a circular economy. We joined the industry-government-academia partnership on the circular economy (known as "Circular Partners") sponsored by the Ministry of Economy, Trade and Industry in October 2023, aiming to help create a circular economy. We also participate in the discussions to develop a country-wide vision and roadmap in the working group established under Circular Partners.

Occupational Health and Safety, Safety and Disaster Preparedness, and Chemical Substance Management

The Central Glass Group strives to ensure safe workplaces and formulates an annual Health and Safety Management Policy. To this end, we engage in occupational health and safety activities, as well as safety and disaster prevention activities at each of our business locations in Japan and overseas. Through education and training, we are creating safe and secure workplaces.

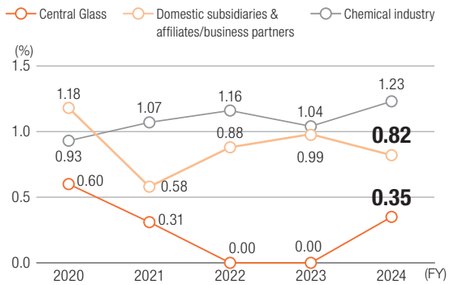
Occupational Health and Safety

In addition to striving to reduce potential risks in our work environments, we aim to foster an awareness of the need to protect our own lives, bodies, and health, and to establish a culture of safety in which all employees can participate.

In FY2024, the number of occupational accidents at our company, domestic affiliates, and subcontractors requiring leave totaled seven, one less than the previous fiscal year.

We will continue to promote safety activities by having all employees in the Group engage in activities to prevent occupational accidents.

Lost-Time Incident Rate



Lost-Time Incident Rate = (Number of Lost Time Injuries/Total Working Hours) x 1,000,000

Safety and Disaster Preparedness

The Group is constantly working to improve our safety and disaster preparedness systems, striving to maintain zero accidents, including fires, explosions, and chemical substance spills.

In addition, to reduce the number of forklift accidents, we are working to prevent accidents through discussions on accident causes and countermeasures, based on prior accident cases, and offering forklift training taught by external instructors.

We will continue our efforts to ensure a safe working environment for employees and the safety and security of our local communities through activities by each business location founded in the Safety and Accident-Prevention Guidelines published by the Japan Chemical Industry Association, and by having veteran skilled technicians pass on their techniques and skills to younger employees.

Chemical Substance Management

The Central Glass Group regards the appropriate management of chemical substances as one of our important responsibilities in our corporate activities, and has included this initiative as an item in our Guidelines for Environment, Safety, and Health*1. Based on these guidelines, we have established a basic policy to comply with laws and regulations related to chemical substances and promote company-wide efforts.

Specifically, to ensure the safe handling of chemical substances, we ascertain information on chemical substances contained in products and raw materials, prepare and provide labels and safety data sheets (SDS*2) based on this information, and ensure that appropriate information is communicated to all concerned parties. In addition, we conduct risk assessments to deepen our understanding of the hazards and toxicity of the chemical substances we handle and to evaluate the risks they pose in advance, and take measures to improve the work environment and control them as necessary. Furthermore, to ensure the safety of workers, we make recommendations and provide guidance on the selection and use of appropriate protective equipment according to the nature and use of chemical substances. We also focus on improving education and training to enable the autonomous management of chemical substances.

Through these efforts, the Group aims to achieve both environmental conservation and occupational safety, thereby contributing to the realization of a sustainable society.

*1 The Guidelines for Environment, Safety, and Health expresses high-level concepts in this area based on our Corporate Philosophy (Basic Philosophy and Purpose), and *Our Values and Responsibilities*.
*2 Safety Data Sheet (SDS): A document on the physicochemical properties, hazards, toxicity, etc. contained in chemical products.

Initiative Examples

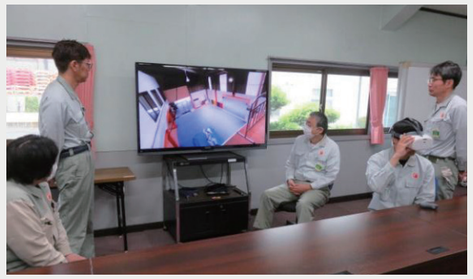
Disaster Drills

Based on government guidance on environmental and safety disaster prevention, the Central Glass Group's plants regularly conduct disaster drills at each site to ensure that employees fulfill the roles required of them and cooperate with fire departments, etc. in the event of an emergency.

Introduction of VR Devices

As part of our safety education, we have introduced virtual reality (VR) devices that can reproduce dangerous situations in a virtual space that would be difficult to experience in reality. This education improves safety awareness and sensitivity to danger by letting employees realistically experience the fear and danger of a serious accident that could occur if rules are not followed.

Though the VR user is normally the only one who can see the experience, the devices we use allow a third party to share the viewpoint of the person experiencing the VR experience through a monitor, making it possible for the entire workplace to share the perception of danger.



Quality Management

We emphasize quality control initiatives that place customer satisfaction first. In addition to complying with laws and regulations, the Group takes customer feedback sincerely in order to provide reliable products and services loved by customers.

Quality Guidelines

We formulated Quality Guidelines as a guideline for *Our Values and Responsibilities* from the Group's Corporate Philosophy: *We continuously seek to enhance quality and uphold our promises to society and our customers*. The Quality Guidelines form a framework to prevent, detect, and respond to quality issues, which are vital aspects of compliance. Each organization formulated its quality policy based on these guidelines.

	Item	Description
Prevent	Cultivate a culture of quality	Provide high quality and reliable products by ensuring compliance with laws and regulations, client requirements, and social responsibilities.
	Perform continuous improvements	Continuously implement quality improvement activities, as well as encourage employees to enhance their awareness and abilities throughout the entire supply chain to keep developing the quality and safety of our products.
	Update and enforce policies and procedures	Comply with each policy and procedure, and update them as needed.
	Improve organizational structures	Ensure the independence and authority of quality control and quality assurance departments so that they can fully exercise their respective duties.
	Invest in human resources and facilities	Invest appropriately in human resources and facilities that are essential to achieving our quality objectives.
Detect	Strengthen audit systems	Detect problems quickly through layered audits conducted by the plants, quality assurance departments, and audit departments.
	Streamline reporting systems	Clarify reporting procedures and reporting guidelines to ensure quick responses to quality issues.
Respond	Respond to problems with corrective and preventive actions.	Prevent recurrences of quality problems by identifying and analyzing the causes, in addition to taking necessary measures such as prompt information disclosure.

Quality Management System

We aim to be an organization that offers reassurance and reliability to stakeholders. We do so by ensuring that we provide products and services meeting the needs of customers and society, and we take action to promote quality activities under the following Quality Management System.

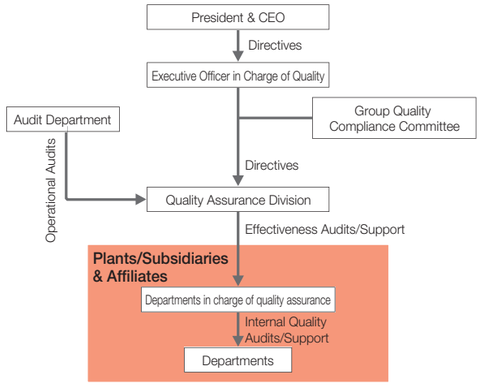
Group Quality Compliance Committee

The Group Quality Compliance Committee serves to strengthen our Quality Management System.

The committee holds three types of meetings: a Quality Promotion Meeting to improve quality activities based on the PDCA cycle, an Emergency Response Meeting to promptly address quality and product safety issues, and a Corrective Action Meeting to ensure that problems do not recur.

Multilayer Audits

We incorporate the concept of multilayered audits into internal audits. Specifically, to maintain and improve the quality assurance system, the Company implements three-layered audits. These are comprised of internal quality audits initiated by quality assurance departments at the plants, effectiveness audits to confirm the effectiveness of internal quality audits of each plant conducted by the quality assurance department at headquarters, and operational audits of the quality assurance department at the headquarters conducted by the Audit Department.



Reporting Line for Quality Issues

We have established a reporting line to promptly respond to quality issues by quickly receiving information on various quality issues discovered by customers or at manufacturing sites and reporting to an appropriate department in charge. This reporting procedure also provides a system to quickly report serious quality issues to management in order to take emergency measures without any delay. Furthermore, we are fostering a quality culture where people want *Bad News First (Fast) and Thanks)*.

Priority Measures: Measures Toward Improving Quality Awareness

We established and put into practice two priority measures: strengthening quality activities through *thorough daily management and vitalization of improvement activities*, and *developing human resources supporting quality activities by enhancing quality education*.

Objective

To be an organization offering reassurance and reliability to stakeholders by ensuring products and services meeting the needs of customers and society.

Measures

(1) Strengthen the quality management system through operation of the Group Quality Compliance Committee.
(2) Strengthen and maintain the Group's quality assurance system through multi-layered audits, and audit suppliers proactively, including contractors.
(3) Properly engage reporting lines for quality issues to respond to any quality issue promptly. Report serious quality issues to management promptly for emergency measures to be taken without any delay.
(4) Strengthen quality activities at sites through the thorough daily management and the revitalization of improvement activities.
(5) Enhance quality education for all divisions and positions to develop human resources that support quality activities.

Product Quality Improvement

Quality Control System for Products and Services

Each plant and subsidiary/affiliate has established a quality control system based on appropriate quality management systems (ISO 9001, IATF 16949*1) and standards (JIS, GMP*2) to maintain and improve product quality and services provided to customers.

*1 IATF 16949: International standard for quality management systems specific to the automotive industry.
*2 GMP (Good Manufacturing Practice): Standards for manufacturing control and quality control of pharmaceuticals.

Measures at Plants, Subsidiaries, and Affiliates

We are working on QC circle activities to maintain and improve product quality. These activities are aimed at the Group's development through the growth of human resources and the organization, as well as achieving our Basic Philosophy, *Creating a Better Future Through* Monozukuri.

Supplier Audits

Through regular audits with participation from our quality assurance departments, we strive to build a sustainable business structure by strengthening our suppliers' quality systems and evaluating their appropriateness from a CSR perspective.

Materiality

Reduce the Number of Complaints

We have addressed the improvement of product quality and customer satisfaction by setting a year-to-year reduction rate concerning the number of complaints as a KPI, with a target to halve this number during the FY2022 to FY2024 medium-term management plan.

Although the year-on-year reduction rate for FY2024 was only 9%, we achieved our medium-term plan target of halving the number of complaints. The Group will remain committed to reducing the number of complaints.

Maintenance/Improvement of Quality Through Audits of Contractors

We will maintain and improve the quality of the entire supply chain of the Central Glass Group by conducting external audits by high-quality contractors.

In FY2024, we achieved an audit implementation rate of 106% versus plan with the support of said contractors. Corrective and improvement actions from audits were followed through to completion to ensure that the quality of outsourced products was maintained and improved. We will continue to conduct audits in a systematic manner.

Improve Quality Education

Employee Training and Awareness-Raising

The Group's education system includes systematic quality instruction for each level of employees in our *Monozukuri* Training targeting career-track and general positions. In addition, we introduced product quality e-learning content in FY2023.

During Quality Month in November every year, we send out messages from the general manager of the Quality Assurance Division, and we hold quality lectures and conduct quality questionnaires to provide opportunities for all Group employees to think about quality activities.

We will continue to enhance the content of our quality education.

Lectures on Quality

As part of quality education, we invited an external lecturer in November 2024 to present a quality lecture on the topic of *Prevention of Quality Fraud: How Does Quality Fraud Occur?*, which was attended by approximately 1,550 people.

We will continue to choose topics to raise quality awareness and provide opportunities for all Group employees to reflect on quality.

DX Strategies

Empowering All Employees to Drive Transformation

The Central Glass Group is pursuing a growth strategy utilizing digital technologies to *Become a Specialty Materials Company* as stated in VISION 2030. As part of these efforts to strengthen our business foundation, we are renewing our next-generation enterprise resource planning (ERP) system, which will be at the core of our operations.

In addition, to establish a sustainable competitive advantage in a rapidly changing market environment, we are embarking on a digital transformation of the entire value chain utilizing DX and AI technologies starting in FY2025. This initiative, the Central Glass Business Transformation (CBX), is our top-priority measure, along with the ERP renewal, and we have established a project structure in which all employees proactively participate.

Medium-Term DX Strategy for Our 2030 Vision

Readiness for the VUCA Era

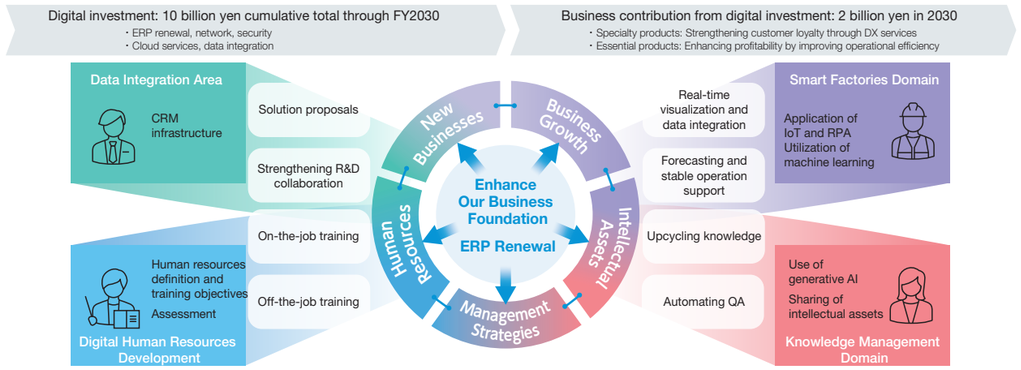
Our strengths lie in our advanced research and development capabilities that support our ability to propose optimal solutions to customer needs, as well as in our flexible and robust production system. In times of increasing uncertainty, we must go beyond traditional incremental improvements and further strengthen core competencies. To achieve this, we have established four priority DX areas within CBX: Smart Factories, Data Integration, Knowledge Management, and Digital Human Resources Development, and will drive transformation in these areas. This enables us to propose agile and sophisticated solutions meeting market changes and contribute to business profitability. We plan to make a cumulative digital investment of 10 billion yen by FY2030, and in that year we expect to reach business contribution of 2 billion yen per year.

Smart Factories	Operational visualization and data integration Utilization of machine learning
Data Integration	Solution proposal by strengthening CRM and R&D collaboration
Knowledge Management	Sharing intellectual assets, upcycling knowledge for value re-creation
Digital Human Resources Development	Developing human resources for CBX execution through on-the-job and off-the-job training

Past Initiatives and Initiatives in FY2025

CBX in Motion, Company-Wide

We have developed a number of projects that incorporate agile development methods, centered on smart factories, and have built a field-driven digital transformation model. The employees involved in these projects will be at the core of our CBX project, powerfully driving it forward and leveraging past successes and failures. In FY2025, we will implement AI in the Smart Factories and Knowledge Management areas, as well as implement digital democratization for all employees by introducing new functions in the Data Integration area, expanding the scope of no/low-code use, and verifying inter-system data integration.



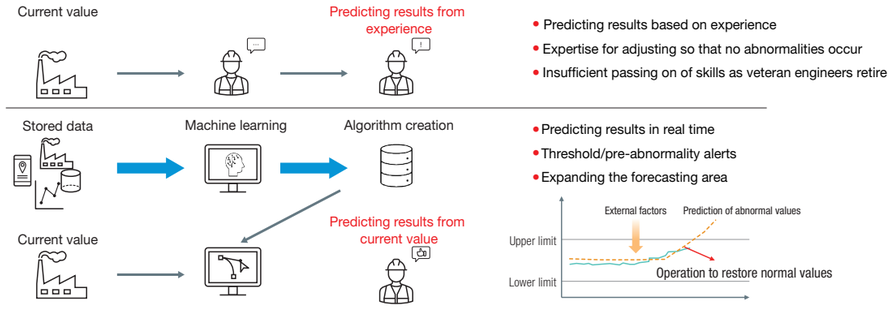
Smart Factories Domain Initiatives

Pioneering Next-Generation Manufacturing With AI

To strengthen the competitiveness of our essential products, we have been promoting staged DX initiatives at our manufacturing sites. In manufacturing plants, centralized monitoring equipment (DCS/PLC) is used to ensure stable operations through constant monitoring of a vast array of instruments. Along with the recent development of IoT technology, we are promoting automation to achieve more advanced operations and higher efficiency. We are further digitizing operations management, visualizing data in real time, integrating data between systems, and improving operational efficiency by using robotic process automation (RPA), and are horizontally deploying these practices throughout the Company.

Currently, we are focusing on building predictive models of operating conditions using machine learning to make advanced use of the big data accumulated through these efforts. Specifically, we aim to establish a smart production system that achieves the trifecta of labor savings, safety, and stable operation by predicting fluctuations in operating conditions in real time based on various input parameters and providing feedback to operators.

In addition, to address the challenge of passing on skills as veteran engineers retire, we are using these digital technologies to strengthen our sustainable manufacturing base.



Knowledge Management Domain Initiatives

Upcycling Intellectual Assets

We are working to advance knowledge management through the use of AI. Currently, we are building a system that enables cross-sectional search and extraction of intellectual assets such as technical documents, manuals, rules, and guidelines accumulated internally. This system not only allows users to rapidly search for and retrieve necessary information, but also has a function to summarize and present related information, which is expected to improve the efficiency of checking work and reduce the number of inquiries. The expansion of eligible search areas will also allow for the transfer of skills to younger engineers and the rediscovery of previously buried expertise, promote information sharing across departments and generations, and contribute to the creation of synergies among businesses. These efforts are aimed at the upcycling of knowledge, where we evolve existing intellectual assets to reuse them and even re-create value, rather than just accumulating knowledge. Going forward, we will continue to improve the creativity and competitiveness of the entire organization through the distribution and utilization of knowledge.

Develop Digital Human Resources Aimed at DX

We are advancing our DX human resources strategy through PDCA cycles for assessment, human resources definition, and training objectives toward the Company-wide deployment of DX. We evaluate and visualize DX literacy and promotion skills, clarify challenges toward the growth of each individual, and set development goals for each role, such as producer, data scientist, technologist, and DX leader. We systematically develop human resources equipped not only with knowledge but also with practical experience and the ability to execute through off- and on-the-job training tailored to their level.

Human resources definition and training objectives

Producers	Execution of business model transformation	3x
Data scientists	Data analysis using AI, etc.	5x
Technologists	Functional and system design	7x
DX leaders	Drivers of transformation in each department	10x

*Versus FY2024

All employees become change leaders

Cybersecurity Initiatives

To ensure that DX is carried out and managed safely, we hold regular in-house information security training sessions and monitor through more advanced anti-malware and automatic detection systems for unauthorized connections and usage. In addition, amidst the growing threat of ransomware and other cyber-attacks, we will continue to strengthen our governance by ensuring employees are alert and aware of security through our information security system.

Human Capital

The Central Glass Group aims to increase the value of our human capital as a corporation that continues providing superior products with high-added value. To this end, we enhance our human resources system and training system to improve the skills of Group company employees.

Director, Senior Executive Managing Officer
Akihiro Ishii

The *monozukuri* that we mention in our corporate philosophy is supported by people, and we have revised the framework and content of our existing educational programs in line with our new human resource development policy of developing professionals and enabling employees to take charge of their own career development. In our efforts to improve employee engagement, we are striving to create an environment in which diverse human resources can work with well-being and wearing a smile by reflecting issues identified from town hall meetings with the president and survey results in various personnel measures.

Among other things, transparency of our personnel evaluation system as well as psychological safety are essential to improve employee job satisfaction. We continue to provide evaluator training to increase satisfaction and motivation for growth among those who are evaluated.

As for the promotion of health and productivity management, we established the Health Promotion Section in October 2023 to promptly address internal and external issues, which enabled us to obtain certification as one of the 2025 Outstanding Organizations of KENKO Investment for Health.

The Central Glass Group will adapt to the era of VUCA and focus on training human resources who have a sense of ownership and can think and act independently, as well as creating a comfortable working environment.

Human Resources Strategy

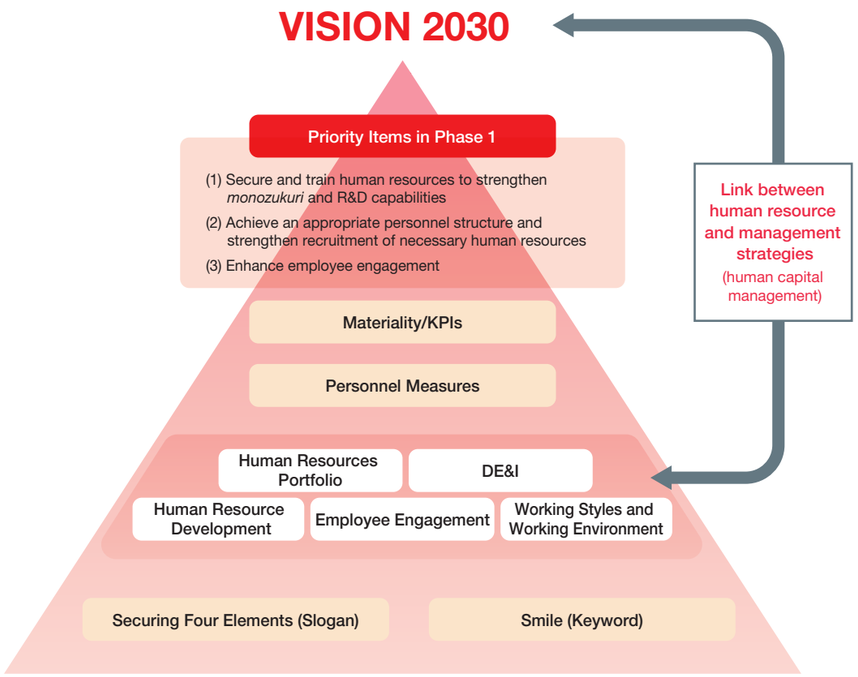
In our basic Basic Philosophy, *Creating a Better Future Through* Monozukuri, we define *monozukuri* as all corporate activities, from research and development, manufacturing, and sales to activities to ensure quality in our operations and contribute to society. We recognize that people are the key to achieving this philosophy, and above all, supporting *monozukuri*. To this end, the Group is committed to recruiting, training, assigning, and retaining employees.

Creating a corporate culture that cherishes people (employees) requires us to become a company that overflows with happiness and vitality, where human capital engages in diversity under the keyword of *smile*, accepting one another and speaking freely, embracing the slogan of *Securing Four Elements*. We will leverage our longstanding culture of honesty and integrity, cultivated and passed down through generations since our founding, to develop our employees and corporate culture. To this end, we strive to provide ample opportunities and establish environments, improving the psychological safety of our employees.

Achieving our VISION 2030 requires sharing stakeholder values and goals regarding technology, solutions, quality, and environmental sustainability. Respecting the sensitivity and diversity of each employee is also essential for generating ideas and meeting such needs. Therefore, we have established specific KPIs and priority measures in Phase 1 of our medium-term management plan through FY2027, which are linked to our management strategies.

Securing Four Elements

1 Secure acceptability	Recognize individuality
2 Secure a place to belong	Understand your purpose
3 Secure equity	Speak freely and take on challenges
4 Secure fairness	Remain highly motivated



Women's Empowerment

Building an empowering environment for female employees will increase the ratio of female employees and female employees in manager positions, create an organization with diverse perspectives, and revitalize our corporate culture. In addition to the development of systems related to childcare and flexible work styles that exceed the statutory requirements, we regularly publish interviews with system users and articles on system awareness in our internal newsletter, and introduce and maintain various training programs.

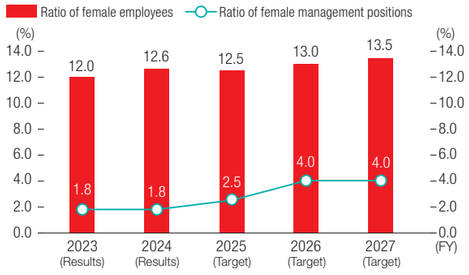
Training for Employees Returning From Childcare Leave

As of FY2024, we have introduced career planning training for female employees up to the third year after returning from childcare leave, so that they can work with peace of mind with a long-term career perspective despite the time constraints and uncertainty caused by childcare.

DE&I Training for Managers

This training has been ongoing since FY2021 to deepen understanding of diverse attributes and work styles and to foster a corporate culture to empower all employees, including female employees.

Ratio of Female Employees / Ratio of Female Management Positions



*Including seconded employees

Encouraging Male Employees to Take Parental Leave

By creating an environment in which male employees, who account for nearly 90% of our employees, can take childcare leave without hesitation, we aim not only to promote male participation in childcare, but also to become a company where employees, regardless of gender, who have time constraints for various reasons such as childcare or nursing care, can work flexibly.

Efforts to Improve the Working Environment

- Regularly informing employees of Human Resources Department policies and systems
- Establishing contact points at each business unit and making individual explanations to employees
- Providing partial salary compensation and support payments during childcare leave

Employment of Persons With Disabilities

We hold semi-annual recruitment promotion meetings with representatives from each business unit to share opinions on what kind of work is possible according to the characteristics of each business unit and on recruitment expertise with the aim of achieving our goals. An administrator has also been assigned at each workplace to provide support at any time.

Improving the Ratio of Employees Taking Paid Leave

To facilitate employees taking long holidays, we set and publicize monthly paid leave incentive days. We are also working with the labor union to facilitate the use of leave.

Increasing Employee Engagement

We have conducted two employee engagement surveys since 2023 to measure the engagement score indicator. Improvement measures, as shown in the table below, are being implemented in response to weaknesses and issues identified from the area (category) analysis of the survey results. Since our initial survey, the engagement score has improved by 3.93%, and we believe we are seeing steady results.

Areas		Measures	Actions
Philosophy and Strategy		Formulated *Our Values and Responsibilities* (2024)	Reviewed the Code of Conduct
Systems Treatment	Evaluation	Revised detailed regulations for promotion examinations (2024)	Reviewed promotion requirements for career-track positions
		Reviewed evaluator training (2025)	Enhanced educational content (e.g., deepening understanding of personnel systems)
Systems Treatment	Salary	Revised role allowances (2025)	Increased role allowances
	Diverse Work Styles	Reviewed shortened working hours for childcare (2025)	Changed availability from after 1 year to after 3 months of employment
		Revised reemployment system (2025)	Improved basic salary, implemented evaluation system, introduced shorter working hours/days, continued employment up to age 70 with conditions, etc.
		Revised telecommuting system (2025)	Reviewed the system to ensure a balance between working in the office and at home
		Introduced a midday leave system (2025)	Permission to leave in the middle of the day for childcare, nursing care, or other circumstances. Also, use of a midday leave allows for a combination of working at home and in the office.
Organizational Climate and Human Resources		Conducted town hall meetings (2023-2024)	The president visited each workplace and conducted a total of 48 meetings. Achieved mutual communication where the president communicates the Company's current status and future direction, and employees communicate their voices directly to the president.
		Reviewed the onboarding program (2025)	Reviewed the program with the aim of enabling new employee contributions more quickly and ensuring their smooth adaptation to the organization. Introduced a mentoring system for career hires by senior employees to promote interaction among employees.
Facilities and Environment		Creating a comfortable working environment (2024-)	Considering reconstruction of plant offices and building a new R&D facility. Introduced high-speed Wi-Fi in telecubes (single-occupancy private rooms) and conference rooms at the head office.
Transformation Activities		Carrying out workplace sharing meetings (2023-)	To enable employees to proactively work on improving the workplace environment, workplace sharing meetings are held where survey results are shared at each workplace and opinions are exchanged. Then, after formulating an action plan, we implement improvement activities.

In addition to the above items, there is a growing awareness of the need to improve engagement throughout the organization, as evidenced by the emergence of proposals and voluntary initiatives by management themselves. These include a mutual respect campaign and the Signature Experience (a system for thinking about the meaning of working at the Company and sharing this with superiors, so that employees can feel their work is worthwhile and valuable).

Through regular monitoring and implementation of improvement measures, we will continue to create an environment where every employee feels fulfilled in their work and can contribute to the Company's growth.

Health and Productivity Management

In July 2024, we established the Health Management Declaration and Basic Policy, and are practicing health and productivity management as we strive to enhance productivity and increase corporate value over the medium to long term by realizing a company where employees can work with well-being and a smile.

Health Management Declaration

The Central Glass Group is committed to achieving our corporate philosophy of *Creating a Better Future Through* Monozukuri. We strive to uphold and enhance employee safety and health to ensure the overall well-being and ability to work with a smile of all employees.

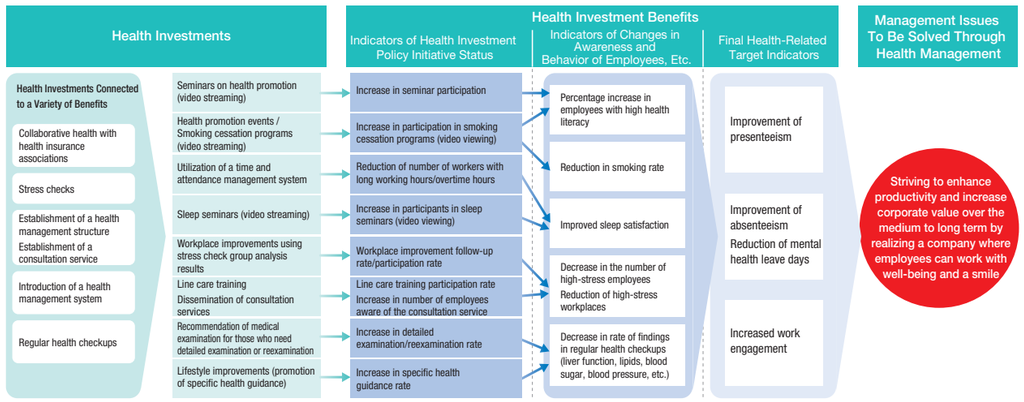
Basic Policy

- We regard the mental and physical health of our employees as our greatest asset and take active measures to maintain and promote employee health.
- We strive to enhance productivity and increase corporate value over the medium to long term by enhancing the well-being of employees.
- We work to create safe and healthy work environments for our employees.

We have developed specific indicators (KPIs) for the initiatives set forth in the Health Management Strategy Map (see chart below) approved by the Health Promotion Committee in September 2024. Examples of initiatives include reducing the smoking rate, improving sleep satisfaction, and decreasing the ratio of high-stress employees. Meanwhile, examples of measures include holding various health-related seminars, distributing videos, and other forms of employee education. We are carrying out measures like these to achieve the aforementioned indicator levels and confirming their effectiveness.

Health Promotion Framework

In recognition of our consideration of and strategic engagement in employee health management from a managerial perspective, on March 10, 2025, Central Glass was certified as one of the 2025 Outstanding Organizations of KENKO Investment for Health (Large Enterprise Category) under the certification system by the Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi.



Performance Indicator (%)	FY2023 Results	FY2024 Results	FY2025 Target	FY2026 Target	FY2027 Target
Reduce in smoking rate	22.5	23.0	21.0	20.0 or less	20.0 or less
Improve sleep satisfaction rate (rate of respondents reporting sufficient sleep)	71.8	68.7	73.0	74.0	75.0
Reduce ratio of high-stress employees identified in stress checks	8.4	8.2	8.0	7.8	7.7

Respect for Human Rights

For more information on our Human Rights Policy, see:

Basic Concept

Respect for human rights is fundamental to our corporate activities to achieve our Basic Philosophy. The Group upholds respect for human rights as essential to those impacted by our business activities.

Initiatives

(1) Formulating the Central Glass Group Human Rights Policy

The Guiding Principles on Business and Human Rights ("Guiding Principles," below), adopted by the United Nations Human Rights Council in 2011, require companies to announce their policies to the public on respect for human rights. The Guiding Principles also call for companies to avoid, mitigate, and address negative impacts on human rights through company activities. The Group established the Central Glass Group Human Rights Policy in February 2024 based on the Guiding Principles.

We also support and respect international norms on human rights, including the International Bill of Human Rights (consisting of the Universal Declaration of Human Rights ; the International Covenant on Economic, Social and Cultural Rights ; and the International Covenant on Civil and Political Rights) and the ILO Declaration on Fundamental Principles and Rights at Work.

(2) Educational Activities for Employees

We added respect for human rights as a topic to our group training programs in FY2024 to disseminate the concept of our human rights policy to employees.

(3) Supply Chain Management

We formulated the Supplier Code of Conduct, requiring suppliers to uphold and respect this code.

Human Resource Development

Basic Concept

We believe that people are the source of support for *monozukuri* (corporate activities) and the source of new value creation, and we promote human resource development throughout the Company accordingly.

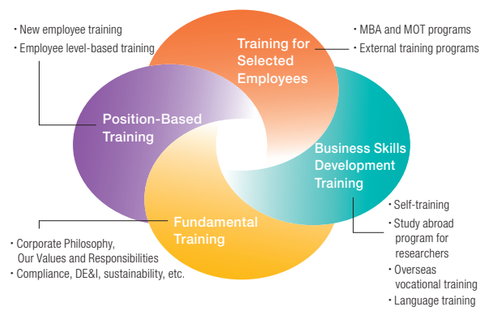
Human Resource Development Policy

To develop professionals who share the Central Glass Group corporate philosophy and *Our Values and Responsibilities*, and who will support the execution of our management strategies and the sustainable growth of the Group, while providing educational opportunities that support the autonomous career development of individuals.

We define professionals as human resources who are active as professionals in their respective workplaces. We will nurture employees who are proactive in all corporate activities, from R&D, manufacturing, and sales, to activities ensuring quality in our operations and contributing to society, and who are not afraid to change and continue to reinvent themselves.

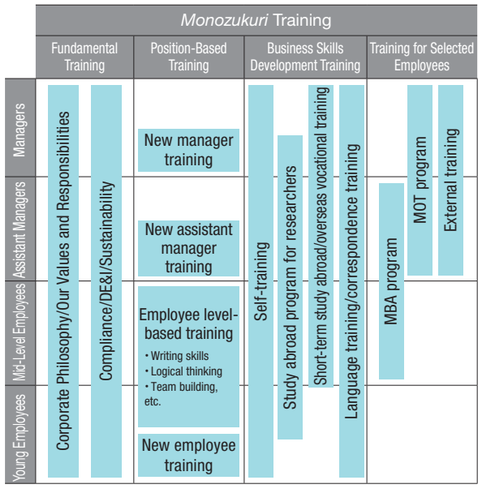
Education System and Major Training Programs and Systems

Based on our corporate philosophy, we position our overall education as *Monozukuri* Education based on the idea that all business activities are linked to manufacturing. We have organized this into four areas: Fundamental Training, Position-Based Training, Business Skills Development Training, and Training for Selected Employees. By efficiently and effectively implementing these education programs, we aim to support the growth and self-realization of each employee, as well as to improve our organizational capabilities.



In-house group training programs help raise awareness and vitalize communication across internal functions according to the position and role of each employee, in accordance with the needs at each level. In addition, the Company provides education for selected employees at the assistant manager and manager levels, utilizing programs such as business schools. The purpose of this program is to develop management perspectives for candidates for senior management in other schools together with participants from outside the Group.

Under our new human resource development policy, we will continue to foster employees' awareness of the need to think independently about their own careers and expand education that allows employees to make their own choices based on their individual career design and needs.



Promotion of DE&I

We conduct ongoing diversity, equity, and inclusion (DE&I) education to promote acceptance of diversity and promote organizational growth and transformational capacity. We eliminate unconscious bias and prejudices that anyone can easily fall prey to, leading to the building of good interpersonal relations and a workplace with job satisfaction.

With regard to respect for human rights, we share the Group's Human Rights Policy through Position-Based Training, deepening awareness of respect for human rights and human rights due diligence in the workplace. Respect for human rights is also addressed in an e-learning course for all Central Glass Group employees, including senior management, to promote understanding throughout the Group.

Strengthening Strategic R&D Capabilities

We have established a self-training system as an opportunity to draw out new ideas from younger employees. Each participant is free to choose a theme that interests them, without being bound by existing products or research frameworks. This system has generated new ideas, leading to various projects.

We are also continuously sending employees to graduate MOT programs to foster those well versed in technologies and management and who are capable of strategic research and technological development. We sent three employees in FY2024, fostering researchers and engineers capable of efficiently commercializing our research and technological advancements aiming for sustainable growth in corporate value.

Column

MOT Exchange Student
Norihiro Kato
Fundamental Chemical Research Center (Matsusaka)
Central Glass Co., Ltd.

For the year of FY2024, I attended the Innovation Program for working professionals at the Nagoya Institute of Technology Graduate School through the Company's MOT Study Abroad program.

I took this course so I could address development speed and the permeation of open innovation, elements I experienced while stationed in North America.
Also, it was because, as a middle manager involved in research and development in the glass sector, I thought it was important to stimulate innovation in collaboration with internal and external organizations.

The program has yielded many results, including the acquisition of facilitation skills to grow ideas, a deeper understanding of organizational management, as well as networking with faculty and peers.

In the future, I would like to contribute to the further promotion of research and development by leading the integration of technologies internally and open innovation with outside entities.

Strengthening Training of Manufacturing Division Leaders

To survive global competition as a manufacturing company, we support engineers, technicians, and indirect workers in acquiring the knowledge and skills needed in their expected roles, while raising awareness among such employees. In 2006, we launched the Active Expert Center (AEC) training program as a leadership development program for the manufacturing division. Selected employees have undergone one year of training through this program. This training program, which has produced 172 graduates to date, will make a new start in FY2025 as Selected Trainee Education, with manufacturing division employees receiving one year of training at research centers and production technology centers to broaden their perspectives. As an R&D-oriented company, we will continue to strengthen cooperation with manufacturing sites to return the fruits of our research and technological development to society.

Personnel Evaluator Training and Human Resource Development

We believe that fair and impartial personnel evaluations play an important role in building a relationship of trust between a company and its employees and in increasing employee motivation, and we promote personnel evaluator training based on this belief.

In addition to e-learning for all managers to understand the personnel evaluation system, we conducted group training for current primary evaluators in FY2024. Participants learned how to reconcile evaluation criteria, check their own evaluation trends, and provide feedback to evaluators so that appropriate evaluations can be made regardless of department.

Going forward, we will continue to raise awareness that the purpose of personnel evaluations is to develop human resources and to improve employee job satisfaction by providing effective feedback to ensure that evaluations are well-understood.

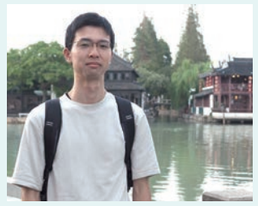
Cultivating Global Perspectives

As Central Glass expands business overseas, it is essential to secure human resources capable of playing an active role across borders. Therefore, with the aim of cultivating a global perspective by experiencing work and life overseas at an early stage in one's career, we have established an overseas study abroad program and an overseas vocational training program, in addition to support for strengthening language skills in English, Chinese, Korean, and other languages.

In FY2024, one student was dispatched to China for three months, learning real-world Chinese at a language school in Beijing, and another three months undergoing vocational training at an affiliated company in Shanghai. We plan to continue to provide practical education that is useful in real work.

Column

Study Abroad Student
Satoshi Nagashima
Procurement & Logistics Strategy Group, Purchasing Department
Central Glass Co., Ltd.



I studied at Beijing Language and Culture University for three months. Through my time in China, I saw many differences from Japan, from the living environment to the way work is done.

In China, in particular, things move forward so fast that information disclosure processes that would take place at every turn in Japan are largely omitted, creating a society where you have to ask people if you want information. Therefore, it is very important to exchange information through dialogue with people in this country, and I feel that learning Chinese is very significant to facilitate this.

After returning to Japan, I took over responsibility for Chinese suppliers and market research. I would like to continue learning Chinese to build good relationships with business partners and keep abreast of the latest market conditions.

General Manager, Human Resources Department
Takeyasu Kawano

General Manager, Career Creation Center
Urara Oi

Purchasing Policy

The Central Glass Group has established the Basic Purchasing Policy under our corporate philosophy of *Creating a Better Future Through* Monozukuri. Based on this policy, we conduct responsible procurement to bring about a sustainable society. The understanding and cooperation of our business partners are essential to promote this initiative, and we will raise the level of our entire supply chain by having them comply with the Supplier Code of Conduct that the Group has established.

Basic Purchasing Policy

1. Compliance with laws, regulations, and international norms

In purchasing activities, we comply with the laws and regulations of each country and region, and support and respect international norms.

2. Fair and impartial transactions

We conduct open, fair and impartial purchasing activities based on the principle of free competition.

3. Selection based on economic rationality

We conduct the selection of business partners through the comprehensive evaluation of economic rationality (quality, price, delivery, stable supply, reliability, after-sales service, technology development capabilities, the stability of the business foundation, response in the event of trouble, and other factors).

4. Coexistence and co-prosperity with business partners

We aim to realize peaceful coexistence and mutual prosperity by building long-term confidential relationships with our business partners.

5. Consideration of human rights and the environment

We promote purchasing activities considering human rights and environmental conservation.

Supplier Code of Conduct (Excerpt)

1. Fair trade, compliance with laws, and support and respect for international norms
2. Ensuring product quality and safety
3. Respect for intellectual property rights
4. Prohibition of giving or receiving inappropriate benefits
5. Prohibition of insider trading
6. Management of confidential information and personal information
7. Initiatives to preserve the environment and create a safe working environment
8. No relationship with anti-social forces
9. Thorough security trade control
10. Respect for human rights
11. Initiatives against conflict minerals

Efforts to Strengthen Our Supply Chains

The Central Glass Group believes in the importance of fulfilling our social responsibility throughout the supply chain to create a sustainable society. In our purchasing activities, we are committed to fair and equitable transactions based on compliance with laws and regulations and respect for international norms. Furthermore, we are working to build a sustainable and highly reliable CSR procurement system, giving due consideration to responsible mineral procurement, environmental conservation, and safety.

Since FY2024, we have distributed Supplier Agreement Confirmation Forms to our major raw material suppliers to confirm their understanding of and compliance with our Supplier Code of Conduct and the status of their efforts. Through these efforts, we confirmed that more than 90% of our suppliers agreed to our Code of Conduct, and that the remaining suppliers are working according to policies formulated to the same or higher standards as our Code of Conduct, revealing no serious incidents throughout the supply chain.

In conducting our Code of Conduct-related investigations, we go beyond mere written evaluations and incorporate in-person audits (including via online meetings). Through dialogue, we gain a deeper understanding of the background of our suppliers' initiatives and the actual situation on the frontlines to grasp the current status of and improvements in of their CSR activities, which cannot be captured through formal evaluations.

To promote sustainable CSR procurement, we will continue to investigate each raw material supplier's understanding of and compliance with our Code of Conduct during regular audits. If any issues are found as a result of our investigations, we will request remediation to improve the corporate value of both parties and the level of the entire supply chain.

Enhancement of Compliance System

The Central Glass Group considers the development and implementation of a compliance system to be essential to fulfill our corporate social responsibilities.
We work with integrity in our daily activities in accordance with *Our Values and Responsibilities*.

Group Structure

The Group established the Compliance Promotion Committee to investigate and deliberate relevant matters to ensure compliance. The committee reports matters received through the internal reporting system and other matters related to compliance awareness and system development to the Board of Directors upon deliberation. The Group also established the following committees to address compliance: the Environment and Safety Promotion Committee, Anti-Monopoly Law Observance Committee, Group Quality Compliance Committee, Security Trade Control Committee, Financial Reporting Risk Assessment Committee, and Sustainability Committee. These committees deliberate on each specialized topic and report to the Board of Directors. See P.79 for a diagram of the structure.

Internal Reporting System

The Central Glass Group established an internal reporting system to discover and resolve compliance issues, including harassment and other misconduct involving the Company and group employees as quickly as possible. This system is available not only to directors and employees of the Central Glass Group, but also to directors and employees of business partners.

The Compliance Promotion Committee Secretariat (Legal Department) and outside attorneys serve as contact points for reporting, available via e-mail or telephone. Anonymous reporting is also allowed. The Group also provides specialized contact points within the company to address various issues, including the harassment contact point, which handles various harassment issues.

We establish rules to prohibit any disadvantageous treatment in reporting or harassment consultations, creating an environment that allows employees to have peace of mind when reporting or consulting with others.

Compliance Initiatives

Compliance Manual

The Central Glass Compliance Manual outlines the rules to ensure Group officer and employee compliance based on *Our Values and Responsibilities*. The manual describes the laws and regulations to be complied with based on the relevant relationship, including for customers, suppliers, the community, society, and so on. Employees have access to this manual at any time through the Company's intranet.

The Compliance Manual also covers *Compliance with Antitrust Laws* and *Gifts and Entertainment (including Overseas), and Political Contributions* to ensure transparent relationships with customers and business partners, while preventing bribery or other corrupt practices. Note that the Anti-Monopoly Law Observance Committee works to ensure thorough compliance with antitrust laws. The Compliance Manual also lists internal reporting contact points and shares information regarding the internal reporting system with employees.

Compliance Education

We conduct annual e-learning training for all employees to ensure that employees, including those at group companies, are aware of the importance of compliance. We also work to raise awareness of compliance through internal lectures and by providing employees time to converse with directors and officers to deepen their understanding of compliance during training by job level.

Other compliance education includes necessary training from external instructors on compliance with antitrust laws, security trade control, and various other matters. In addition, we endeavor to expand and revise compliance education based on social, environmental, and economic trends, providing more focused education in areas where laws and regulations have been newly enacted or revised. The Compliance Promotion Committee, which meets once a year, monitors the state of our training and education programs.

One such example is the necessary education we provide on anti-bribery and anti-corruption regulations and other internal rules we implement to prevent bribery, corruption, etc. The Group received no reported cases of anti-bribery regulation violations in FY2024.

We conducted various training programs in FY2024, including in-house seminars on security trade control and in-house seminars by outside instructors on security trade control and antitrust laws.

Corporate Governance

Maximizing Corporate Value by Achieving VISION 2030

Outside Director
Keikou Terui

Outside Director
Shiori Ishihara

Outside Director
Masaya Kawata

Outside Director (Audit and Supervisory Committee Member)
Toshihide Nishimura

Outside Director (Audit and Supervisory Committee Member)
Toshifumi Mikayama

Outside Director (Audit and Supervisory Committee Member)
Masako Goto

Director, Senior Executive Managing Officer
Akihiro Ishii

Representative Director, President & CEO
Kazuhiko Maeda

Representative Director, Senior Executive Managing Officer
Tetsuo Kanai

Director (Audit and Supervisory Committee Member)
Masanori Murata

Director Introduction (as of the end of June, 2025)

Representative Director, President & CEO
Kazuhiko Maeda
Tenure: 10 years
Attendance at Board of Directors meetings: 16/16

April	1984	Joined the Company
June	2006	General Manager, Chemicals Business Development Department
October	2009	General Manager, Chemicals Business Development Department (Organization name in Japanese changed with English unchanged)
October	2012	General Manager, Energy Materials Sales Department
June	2014	Executive Officer, General Manager, Energy Materials Sales Department
June	2015	Director, Executive Managing Officer
June	2021	Representative Director, Senior Executive Managing Officer
June	2022	Representative Director, Senior Executive Vice President
June	2023	Representative Director, President & CEO (current position)

Representative Director, Senior Executive Managing Officer
Tetsuo Kanai
Tenure: 1 year
Attendance at Board of Directors meetings: 13/13*1

April	1988	Joined the Company
November	2014	General Manager, Automotive Glass Department; Representative Director of Central Saint-Gobain Investment Co., Ltd. (concurrent)
April	2018	CEO of Carlex Glass America, LLC; Chairman of the Board of Carlex Glass Luxembourg S.A. (concurrent)
September	2019	CEO of Carlex Glass America, LLC; Director of Carlex Glass Luxembourg S.A. (concurrent)
April	2021	General Manager, Corporate Administration Department
June	2022	Executive Officer, General Manager, Corporate Administration Department
June	2023	Executive Managing Officer
June	2024	Director, Executive Managing Officer
June	2025	Representative Director, Senior Executive Managing Officer (current position)

Director, Senior Executive Managing Officer
Akihiro Ishii
Tenure: 2 years
Attendance at Board of Directors meetings: 16/16

April	1986	Joined the Company
September	2016	General Manager, Chemical Research Center
June	2019	Executive Officer, General Manager, Chemical Research Center
June	2021	Executive Managing Officer, General Manager, Chemical Research Center
July	2022	Executive Managing Officer
June	2023	Director, Executive Managing Officer
June	2024	Director, Senior Executive Managing Officer (current position)

Director
Masaya Kawata
Tenure: 4 years
Attendance at Board of Directors meetings: 15/16

April	1975	Joined Nisshinbo Industries, Inc. (currently Nisshinbo Holdings Inc.)
June	2006	Managing Officer, General Manager, Human Resources Division of Nisshinbo Industries, Inc.
April	2007	Deputy General Manager, Accounting & Finance Department of Nisshinbo Industries, Inc. (concurrent)
June	2007	Director, Executive Officer of Nisshinbo Industries, Inc.
April	2008	Deputy Chief of Business Support Center, Nisshinbo Industries, Inc.
April	2009	Representative Director, President of Nisshinbo Brake Inc.
June	2010	Director, Executive Managing Officer of Nisshinbo Holdings Inc.
June	2011	Deputy Chief of Corporate Strategy Center; General Manager of Business Development Division of Nisshinbo Holdings Inc. (concurrent) Representative Director and President of Nisshinbo Chemical Inc.
June	2012	Director, Senior Executive Managing Officer of Nisshinbo Holdings Inc. Representative Director and President of Nisshinbo Mechatronics, Inc.
June	2013	Representative Director, President of Nisshinbo Holdings Inc.
June	2019	Representative Director, Chairman of Nisshinbo Holdings Inc.
June	2021	Outside Director of the Company (current position)
March	2022	Director, Chairman of Nisshinbo Holdings Inc.

Director
Shiori Ishihara
Tenure: 1 year
Attendance at Board of Directors meetings: 13/13*1

April	2010	Joined the Bank of Japan
December	2014	Registered as an attorney (Daini Tokyo Bar Association); joined Asahi Law Office
April	2017	Joined Freeman & Partners
September	2019	Joined Smith, Gambrell & Russell, LLP, USA
September	2020	Re-registered as an attorney (Daini Tokyo Bar Association); rejoined Asahi Law Office (current position)
October	2021	Registered as an attorney-at-law in the State of New York, U.S.A.
January	2023	Partner of Asahi Law Offices (current position)
June	2024	Outside Director of the Company (current position)

Director
Keikou Terui
Tenure: - (New appointment)

April	1979	Joined Ministry of International Trade and Industry (currently Ministry of Economy, Trade and Industry)
July	2008	Deputy Minister for Technical Affairs, Minister's Secretariat
January	2011	Director-General of Kanto Bureau of Economy, Trade and Industry
April	2012	Director-General of Regional Economic and Industrial Policy (retired in June 2013)
August	2013	President of Japan Utility Telemetering Association (current position)
June	2014	Director of Union of Japanese Scientists and Engineers (current position) Outside Director of Ube Industries, Ltd.
March	2016	Outside Director of Bridgestone Corporation
June	2016	Outside Director of Organo Corporation
June	2020	Executive Director of Japan Chemical Innovation and Inspection Institute (current position); Director of Food Contact Materials Safety Center (current position) (concurrent)
June	2025	Outside Director of the Company (current position)

Director (Audit and Supervisory Committee Member)
Masanori Murata
Tenure: 3 years*2
Attendance at Board of Directors meetings: 16/16*3

April	1988	Joined the Company
June	2018	General Manager, Audit Department
June	2022	Full-Time Corporate Auditor
June	2025	Director (Audit and Supervisory Committee Member) of the Company (current position)

Director (Audit and Supervisory Committee Member)
Toshihide Nishimura
Tenure: 4 years*2
Attendance at Board of Directors meetings: 16/16*3

April	1979	Joined Onoda Cement Co., Ltd. (currently Taiheiyo Cement Corporation)
April	2006	General Manager, Construction Materials Business Department of Taiheiyo Cement Corporation
May	2009	General Manager, Accounting & Finance Department of Taiheiyo Cement Corporation
April	2012	Executive Officer, General Manager, Related Business Department of Taiheiyo Cement Corporation
April	2015	Executive Managing Officer of Taiheiyo Cement Corporation
June	2015	Director, Executive Managing Officer of Taiheiyo Cement Corporation
June	2016	Outside Corporate Auditor of Nippon Concrete Industries Co., Ltd.
April	2017	Director of Taiheiyo Cement Corporation
June	2017	Full-Time Corporate Auditor of Taiheiyo Cement Corporation
June	2021	Outside Corporate Auditor of the Company
June	2025	Outside Director (Audit and Supervisory Committee Member) of the Company (current position)

Director (Audit and Supervisory Committee Member)
Toshifumi Mikayama
Tenure: 2 years*2
Attendance at Board of Directors meetings: 15/16*3

April	1983	Joined Kirin Brewery Co., Ltd. (currently Kirin Holdings, Inc.)
September	2002	Director of Pharmaceutical Research Laboratory, Pharmaceutical Division of Kirin Brewery Co., Ltd.
March	2004	General Manager, Planning Division, Pharmaceutical Division of Kirin Brewery Co., Ltd.
July	2007	Director, Executive Officer, Head of Research Division of Kirin Pharma Company, Limited
October	2008	Executive Officer, Head of Research Division of Kyowa Hakko Kirin Co., Ltd. (currently Kyowa Kirin Co., Ltd.)
April	2010	Executive Officer, General Manager, Corporate Strategy & Planning Department of Kyowa Hakko Kirin Co., Ltd.
March	2012	Executive Managing Officer, General Manager, Overseas Business Department of Kyowa Hakko Kirin Co., Ltd.
March	2014	Director, Executive Managing Officer, General Manager, Overseas Business Department of Kyowa Hakko Kirin Co., Ltd.
March	2018	Director, Senior Executive Managing Officer, Supervising Overseas Business of Kyowa Hakko Kirin Co., Ltd.
March	2021	Director, Executive Vice President Supervising Overseas Business Department of Kyowa Kirin Co., Ltd.
June	2023	Chairman of Kato Memorial Bioscience Foundation (current position) Outside Corporate Auditor of the Company
July	2024	Board Member of WinHealth International Company Limited
March	2025	Outside Director of Kuraray Co., Ltd (current position)
June	2025	Outside Director (Audit and Supervisory Committee Member) of the Company (current position)

Director (Audit and Supervisory Committee Member)
Masako Goto
Tenure: 2 years*2
Attendance at Board of Directors meetings: 16/16*3

October	2000	Joined Showa Ota & Co. and Century Audit Corporation (currently Ernst & Young ShinNihon LLC)
April	2004	Registered as a certified public accountant
October	2007	Manager of Shin Nihon & Co. (currently Ernst & Young ShinNihon LLC)
August	2017	Vice-Chairperson of Public Relations Committee of the Japanese Institute of Certified Public Accountants
October	2017	Senior Manager of Shin Nihon & Co. (currently Ernst & Young ShinNihon LLC)
June	2023	Representative of Masako Goto Certified Accountant Office (current position) Outside Corporate Auditor of the Company
June	2025	Outside Director (Audit and Supervisory Committee Member) of the Company (current position)

*1 Attendance since appointment as Director on June 27, 2024
*2 Including years of service as a corporate auditor
*3 Attendance as a corporate auditor

Executive Officers
(excluding individuals concurrently serving as Director)

Executive Managing Officers	Yoshinori Akamatsu Hidehisa Nanai Mototsugu Ichinose Masaaki Kawase Shigeru Suenaga Satoru Narizuka Shinichi Okamura Yuzuru Morino
Executive Officers	Taizo Kawakita Masato Nakashima Masatomi Kanai Tadayuki Kawashima Nobuyuki Yagi Motohisa Sueoka

Basic Concept

Our basic approach to corporate governance is to constantly enhance the transparency and fairness of overall management to achieve sustainable growth and increase corporate value. We aim to establish an organizational structure that enables flexible and efficient decision-making that responds quickly to changes in the business environment.

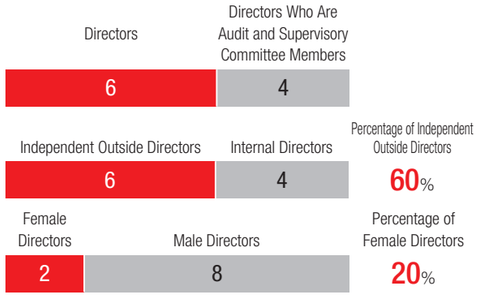
For more information, please see our Corporate Governance Report (Japanese only).
https://www.cgco.co.jp/assets/pdf/company/governance/governance_01.pdf

Corporate Governance Structure Outline

Item	Details
Institutional design	Company with an Audit and Supervisory Committee
Number of directors	10 (2)
Number of outside directors	6 (2)
Of directors, the number of Audit and Supervisory Committee members	4 (1)
Number of outside directors	3 (1)
Director term	1 year (2 years for directors who are Audit and Supervisory Committee members)
Executive officer system	Established

*Figures in parentheses indicate the number of female officers

Director Composition



Changes in Corporate Governance Enhancement

Internal directors / Male outside directors / Female outside directors / Internal corporate auditors / Male outside corporate auditors / Female outside corporate auditors

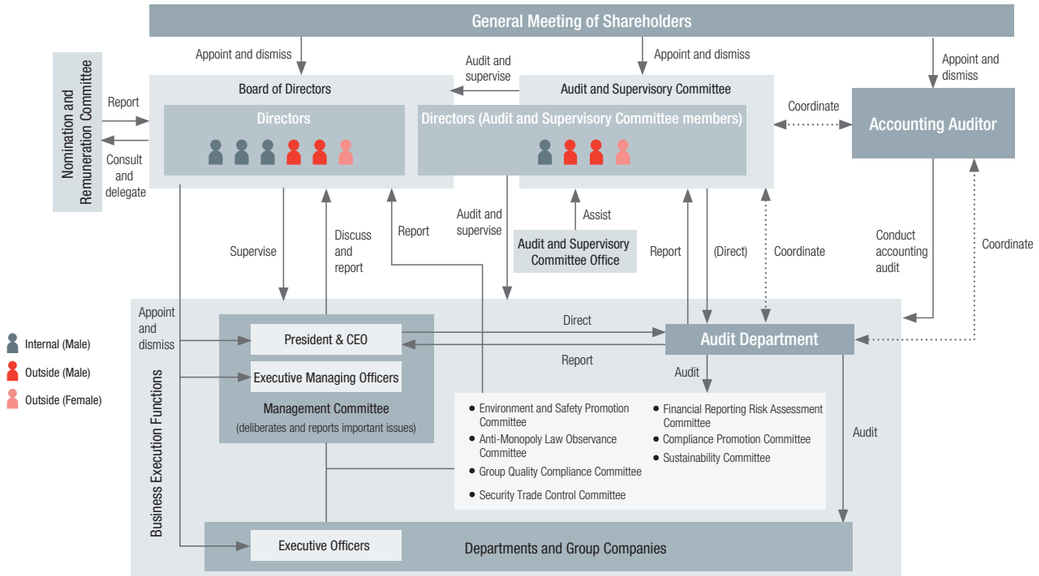
			5	10	15
June	2003				
June	2004	Introduced the executive officer system			
June	2005	Increased corporate auditors (4 → 5)			
June	2006	• Abolished retirement benefits for executives • Changed term for directors (2 years → 1 year)			
June	2009	Appointed outside directors			
June	2013	Increased the number of outside directors (1 → 2)			
December	2015	Began evaluating the effectiveness of the Board of Directors			
June	2018	• Appointed a female outside director • Increased the number of outside directors (2 → 3)			
March	2019	• Abolished anti-takeover measures • Established the Nomination and Remuneration Committee			
November	2021	Established the Sustainability Committee			
December	2021	Disclosed our skills matrix			
June	2023	Appointed a female outside corporate auditor			
July	2023	Appointed an outside director as chair of the Nomination and Remuneration Committee			
June	2025	• Transitioned to a company with an Audit and Supervisory Committee • Abolished the advisor system			

Transition to a Company With an Audit and Supervisory Committee

The Company has transitioned to become a company with an Audit and Supervisory Committee upon resolution at the Ordinary General Meeting of Shareholders held in June 2025.

This institutional design strengthens the monitoring and supervisory functions of the Board of Directors by making Audit and Supervisory Committee members, who are responsible for auditing the execution of duties, members of the Board of Directors, and delegates some business execution decisions to directors (representative director, president & CEO). In addition, the majority of directors (including Audit and Supervisory Committee members) who are members of the Board of Directors are independent outside directors to establish a corporate governance system that ensures transparency and fairness in management.

Corporate Governance Structure Chart (as of June 27, 2025)



Outside Director, Chair of the Audit and Supervisory Committee **Toshihide Nishimura**

Audit and Supervisory Committee members have taken over the monitoring and supervisory functions of the Board of Directors, a task previously performed by corporate auditors. In a way, these are directors who audit the execution of duties by directors and others. We also believe that giving these members voting rights on the Board of Directors will strengthen governance because, unlike the obligation of corporate auditors that stops at expressing their opinions, they can now directly participate in expressing approval or disapproval of motions. Furthermore, since the Board of Directors can delegate a portion of important business execution-related decisions to representative directors and other parties, auditing at the decision-making stage becomes even more important than before. It is for this purpose that the Audit and Supervisory Committee will continue to investigate the status of business execution by directors, each business unit, subsidiaries, and others.

At the same time, the Audit and Supervisory Committee Office, which assists the Audit and Supervisory Committee in its duties, has been newly established to collect information and assess various situations alongside its staff, thereby enhancing audits. In addition, the presence of the general manager of the Audit Department at meetings of the Audit and Supervisory Committee has enabled closer cooperation with the Audit Department and has further ensured the effectiveness of audits by directly directing and ordering audits when necessary.

In light of these new functions, the Audit and Supervisory Committee will build a better corporate governance system and faithfully fulfill its role in sustainable growth and enhancement of corporate value.

Governance-Related Meeting Bodies

Legend: Internal / Outside

Board of Directors

Chair: Representative director, president & CEO / Members:

The Board of Directors meets once or more monthly or as needed to deliberate and decide on statutory resolutions and important management matters in accordance with Board regulations. The Board also supervises the execution of business operations by the president & CEO and other executive officers.

In fiscal 2024, the Board of Directors oversaw the execution of business operations, determined candidates for the positions of director and executive officer, and approved important matters such as the medium-term management plan, capital policies, and budgets.

Audit and Supervisory Committee

Chair: Outside director / Members:

The Audit and Supervisory Committee meets monthly or as needed to discuss and resolve important audit matters. This committee also mutually exchanges opinions on the status of audits, establishing an efficient and effective audit system. In addition, representative directors and Audit and Supervisory Committee members deepen mutual understanding and meet regularly to exchange opinions on important management and audit issues.

In accordance with the auditing standards established by the Audit and Supervisory Committee, committee members attend Board of Directors meetings and other important meetings to audit the execution of duties by directors and executive officers. To enhance auditing, Audit and Supervisory Committee members also conduct audits of the status of business execution by each of the Company's business units and subsidiaries, among other entities.

Nomination and Remuneration Committee

Chair: Outside director / Members:

The Nomination and Remuneration Committee was established as a voluntary advisory body to the Board of Directors. This committee further enhances our corporate governance by strengthening the transparency, fairness, and objectivity of Board functions regarding the nomination and remuneration of directors and Audit and Supervisory Committee members. The committee consists of at least three members, a majority of whom are independent outside directors (including outside Audit and Supervisory Committee members), with at least one representative director. The committee's chair is appointed by resolution of the committee from among outside directors (including outside Audit and Supervisory Committee members).

In fiscal 2024, the committee discussed the selection of candidates for the positions of director, corporate auditor, and executive officer, succession planning for the CEO, the amount of compensation for directors and executive officers, revision of the executive compensation system, abolition of the advisor system, and other matters.

Management Committee

Chair: President & CEO

The Management Committee, in accordance with the committee regulations, meets once a week to discuss important business execution matters, which are decided by the president and CEO. The committee also reviews proposals to be submitted to the Board of Directors.

Composition of Each Meeting Body

(◎ = Chair)

Name	Position	Board of Directors	Audit and Supervisory Committee	Nomination and Remuneration Committee
Kazuhiko Maeda	Representative Director, President & CEO	◎		○
Tetsuo Kanai	Representative Director, Senior Executive Managing Officer	○		○
Akihiro Ishii	Director, Senior Executive Managing Officer	○		
Masaya Kawata	Outside Director	○		◎
Shiori Ishihara	Outside Director	○		○
Keikou Terui	Outside Director	○		○
Masanori Murata	Director, Full-time Audit and Supervisory Committee Member	○	○	
Toshihide Nishimura	Outside Director, Audit and Supervisory Committee Member	○	◎	○
Toshifumi Mikayama	Outside Director, Audit and Supervisory Committee Member	○	○	
Masako Goto	Outside Director, Audit and Supervisory Committee Member	○	○	

Evaluating the Board of Directors' Effectiveness

Our Board of Directors takes initiative in analyzing and evaluating its own effectiveness overall once a year. In March 2025, the Board of Directors had all directors and Audit and Supervisory Committee members conduct a self-evaluation using questionnaires. Analysis and evaluation of the responses by the Board of Directors confirmed that the Board of Directors is generally functioning effectively.

With regard to the issue of efficient operation of the Board of Directors and enhancement of information sharing, which was recognized in the previous analysis and evaluation, the Company is striving to provide more substantial information to outside directors by going paperless and introducing meeting systems, etc. This was done so that efficient and active discussions can be held at the Board of Directors meetings that contribute to medium- to long-term improvement of corporate value.

In addition, the Board of Directors will continue to further discuss important topics such as sustainability initiatives.

Appointing Executives

Policy and Procedure for the Appointment of Executives

Director and executive officer candidates nominated and appointed by the Board of Directors must be knowledgeable in various corporate management matters and have excellent character, insight, and execution skills. Directors should also be capable of fulfilling their managerial duties. The Board of Directors nominates director candidates in accordance with Nomination and Remuneration Committee reports and director regulations. The Board of Directors also appoints executive officers in accordance with Nomination and Remuneration Committee reports and executive officer regulations. In addition, those who are appointed as directors and executive officers shall lose their status as employees.

Directors who are Audit and Supervisory Committee members nominated by the Board of Directors should contribute to Company supervisory functions, audit the execution of director duties as an independent body accountable to shareholders, and strive to maintain independence. At the same time, these directors must maintain a constant fair and unbiased attitude and act based on their own convictions. In nominating candidates for directors who are Audit and Supervisory Committee members, the Board of Directors must consider reports from the Nomination and Remuneration Committee and obtain the consent of the Audit and Supervisory Committee. Audit and Supervisory Committee members may express their opinions at the General Meeting of Shareholders regarding the appointment of directors who are Audit and Supervisory Committee members.

Executive Diversity (Skill Matrix)

In order to realize VISION 2030, our long-term vision to *Become a Specialty Materials Company contributing to the realization of a sustainable society*, we have selected the skills we expect from our directors from the perspective of flexible and efficient decision-making on important management matters and appropriate monitoring and supervision of business execution. These expected skills we have selected are shown in the accompanying table.

The skills expected of directors shall be reviewed from time to time in light of management strategies and other factors.

Skills Matrix

Name	Gender	Position	Expected Skills for Directors							
			Corporate Management	Finance and Accounting	Law and Compliance	International Affairs	Sustainability	Sales and Marketing	Technologies and R&D	Digital Transformation
Kazuhiko Maeda	Male	Representative Director, President & CEO	●			●	●	●	●	●
Tetsuo Kanai	Male	Representative Director, Senior Executive Managing Officer	●	●	●	●	●			
Akihiro Ishii	Male	Director, Senior Executive Managing Officer						●	●	●
Masaya Kawata	Male	Outside Director	●	●		●				
Shiori Ishihara	Female	Outside Director			●	●				
Keikou Terui	Male	Outside Director			●		●		●	
Masanori Murata	Male	Director and Full-time Audit and Supervisory Committee Member		●	●					
Toshihide Nishimura	Male	Outside Director and Audit and Supervisory Committee Member	●	●						
Toshifumi Mikayama	Male	Outside Director and Audit and Supervisory Committee Member	●			●			●	
Masako Goto	Female	Outside Director and Audit and Supervisory Committee Member		●	●		●			

*This matrix does not intend to comprehensively show all knowledge and experience held by each director.

Executive Remuneration

The Company's executive remuneration system consists of fixed remuneration (monetary), variable remuneration (monetary) reflecting the degree of achievement against consolidated performance and greenhouse gas (GHG) emissions targets and relative total shareholder return (TSR), and performance-based stock remuneration. This system is designed to motivate management to be aware of the linkage between consolidated performance, contribution to CO_2 reduction, and our stock value on the market. However, remuneration for outside directors and Audit and Supervisory Committee members, who occupy a position independent of business execution, consists only of fixed remuneration, as variable remuneration reflecting business performance and other factors is not an appropriate method for determining remuneration.

The procedure for determining remuneration for each officer attribute is as follows.

- The total amount of remuneration to be paid to all directors (excluding directors who are Audit and Supervisory Committee members) has been determined by a resolution of the General Meeting of Shareholders to be no more than 430 million yen per year (including 50 million yen for outside directors). The specific allocation to each director is determined by the Nomination and Remuneration Committee on delegation from the Board of Directors, after multifaceted review including consistency with the policy on determining executive remuneration.
- The total amount of remuneration to be paid to all directors who are Audit and Supervisory Committee members has been determined by a resolution of the General Meeting of Shareholders to be no more than 120 million yen per year. The specific allocation to each director who is an Audit and Supervisory Committee member is determined through discussions among the Audit and Supervisory Committee members.
- Separately from the above amounts, the maximum amount of money to be contributed for the acquisition of the Company's shares necessary to deliver performance-based stock remuneration to directors (excluding outside directors) for approximately three years during the trust period has been resolved at the Ordinary General Meeting of Shareholders held in June 2025 to be 120 million yen in total.
- The Nomination and Remuneration Committee, on delegation from the Board of Directors, determines the specific allocation to each executive officer based on a multifaceted review, including consistency with the policy on determining executive remuneration.

Policy on Determining Individual Remuneration

The Board of Directors delegated the Nomination and Remuneration Committee to conduct a multifaceted review, including on director consistency with decision-making policies, to determine monetary remuneration for individual directors. As a result, we have determined that individual remuneration is in line with our decision-making policies.

(1) Fixed remuneration

The Nomination and Remuneration Committee deliberates and determines fixed remuneration based on job position and recommended evaluations from the president and CEO. These recommendations reference survey data from an external professional organization.

(2) Performance-based remuneration

We multiply base amounts by performance-based coefficients to determine performance-based remuneration. The Nomination and Remuneration Committee determines this base amount by discussing job position and recommended evaluations from the president and CEO. We calculate performance-based coefficients based on the extent to which consolidated operating profit meets the target for the previous fiscal year.

(3) Performance-based stock remuneration

We grant performance-based stock remuneration in accordance with the Stock Delivery Regulations, awarding points (one point equals one share) each fiscal year based on the achievement of target indices. In principle, we deliver shares and cash in line with accumulated points upon retirement. We determine the points awarded based on the achievement of our target consolidated operating profit, ROE, and GHG emissions indicators for the fiscal year, as well as relative TSR (comparing Company TSR and TOPIX growth rate including dividends) based on basic points for each position.

(4) Percentage of remuneration by type

The Nomination and Remuneration Committee considers the percentage of remuneration for each type of director based on survey data from an external professional organization. The approximate ratio of each type of remuneration is fixed remuneration: performance-based remuneration: performance-based stock remuneration = 65:28:7 (in the event that 100% of the performance benchmark is met).

To realize VISION 2030, our long-term vision, we have made the following changes to the evaluation indicators (2) and (3) on the left, which are linked to business performance. This is done to further enhance the contribution of directors and others to improving corporate value and to increase their awareness of sharing value with our shareholders and other stakeholders.

- Performance-based remuneration, a short-term incentive
  Strengthening linkage with achievement of short-term financial targets

Before

Evaluation Indicator	Evaluation Weight	Benchmark
Consolidated ordinary profit	70%	Average value over the last 5 fiscal years
Total shareholder return	30%	Medium-term management plan target value

After

Evaluation Indicator	Evaluation Weight	Benchmark
Consolidated operating profit	100%	Full-year performance forecast value

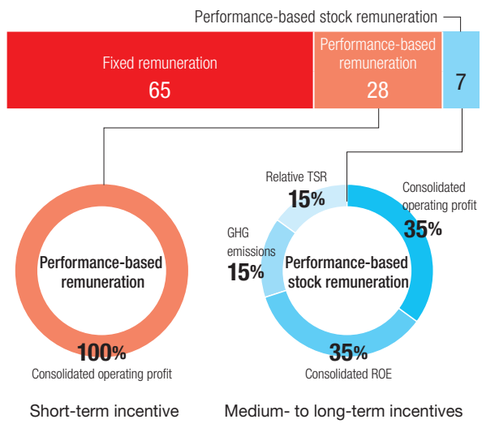
- Performance-based stock remuneration, a medium- to long-term incentive
  Increasing linkage with achievement of medium- to long-term financial targets, contribution to CO_2 reduction, and value from a shareholder perspective

Before

Evaluation Indicator	Evaluation Weight	Benchmark
Consolidated ordinary profit	100%	Full-year performance forecast value

After

Evaluation Indicator	Evaluation Weight	Benchmark
Consolidated operating profit	35%	Medium-term management plan target value
Consolidated ROE	35%	
GHG Emissions	15%	
Relative TSR	15%	TOPIX growth rate including dividends



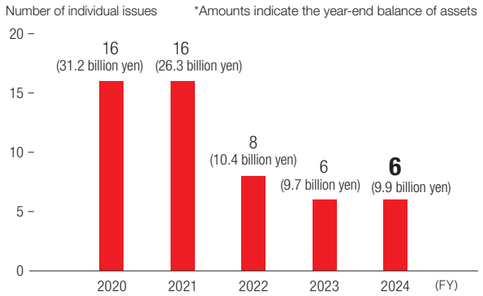
Cross-Shareholdings

The Company evaluates each individual stock to determine the appropriateness of the listed cross-shareholdings and whether the benefits and risks justify the cost of capital. We also consider selling shares that do not contribute to the medium- to long-term improvident of our corporate value, thereby reducing cross-shareholdings.

We plan to retain listed shares that contribute to the medium- to long-term improvement of our corporate value. We base this decision on a comprehensive assessment of management strategies, measures to address risks, and other non-financial factors to maintain and strengthen partnerships, transactional relationships, and business ties.

Based on the above policy, the Board of Directors examines and reviews cross-shareholdings based on the above policy at least once a year.

Cross-Shareholdings



Message From Outside Directors

With the start of the new medium-term management plan, Central Glass has changed institutional design and transitioned to a company with an Audit and supervisory Committee. Our role in rapid decision-making and supervision will become even more important. As outside directors, we are committed to further strengthening the company's medium- and long-term growth and governance.

Looking forward to creative technologies that contribute to a sustainable society

Outside Director
Keikou Terui

Central Glass has created many valuable products in glass and chemicals over the years. In 2024, the company published its long-term management target, VISION 2030, which describes how Central Glass aspires to *Become a Specialty Materials Company contributing to the realization of a sustainable society* through unique research and development. The company has developed many environmentally friendly innovations, including low-GWP products and energy-saving products. The need for these types of solutions will only increase in the future.

I expect that Central Glass, as an R&D-oriented company, will create high-value-added products through competitive and original technologies, contributing to the realization of a sustainable society, as well as the enhancement of its own corporate value.

I am committed to providing effective advice based on my experience and knowledge, and I intend to work in cooperation with the management team to achieve the company's goals in my role of providing objective and independent advice from an outside perspective.

Offering opinions from a working attorney's perspective to avoid inconsistencies and oversights

Outside Director
Shiori Ishihara

I was appointed as an outside director last year. In attending Board of Directors meetings over the past year, I have been impressed by the tireless efforts and ingenuity of the company's internal officers and administrative staff who support the Board, enhancing the effectiveness of Board meetings. Even over the course of the year, I noted how preliminary explanations before Board meetings have been detailed while evolving to be easier to understand. As someone without extensive technological or product expertise, this information has been a great support in deepening my understanding.

The atmosphere of Board meetings has been conducive to asking questions and expressing opinions, allowing me to confidently participate in discussions from the start. I am encouraged to see that, despite being a company of tradition, Central Glass took a forward-looking approach to incorporating outside perspectives into the new medium-term management plan.

This year, the company transitioned to a Company with an Audit and Supervisory Committee, becoming even more engaged in strengthening its governance structure. I will continue to provide insight from an outside perspective, offering my knowledge as an attorney to ensure that the decision-making process regarding important matters is consistent and that the company does not overlook any major risks. As discussed in last year's integrated report, we are convinced that building a company in which members come from diverse backgrounds who grow and demonstrate their value without being restricted by stereotypes will lead to higher corporate value. I will do everything I can to help Central Glass achieve this goal.

Encouraging the visualization of future narratives

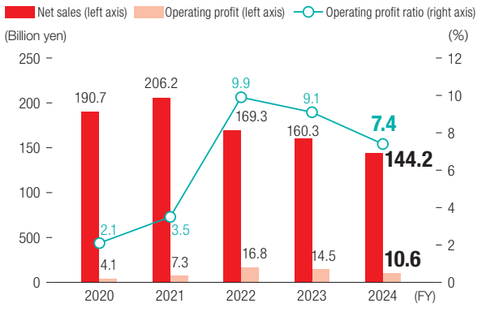
Outside Director
Masaya Kawata

Looking back on my four years as an outside director, I recognize that the Central Glass management team has been bold in taking on the challenge of reforming the company's business structure and driving strategic scenarios. I also recognize the efforts of the employees, who have worked together under this policy. This combination of leaders and dedicated employees is the strength of the company and an asset for increasing future value. The proactive disclosures of financial and non-financial information under VISION 2030 include a clear picture of the company's direction as a specialty materials company, the transition to a Company with an Audit and Supervisory Committee, and an organizational culture that encourages frank and vigorous debate. I have high expectations that this plan will help the company continue to earn the belief and support of more stakeholders, as Central Glass continues to contribute to society and achieve sustainable corporate value improvement.

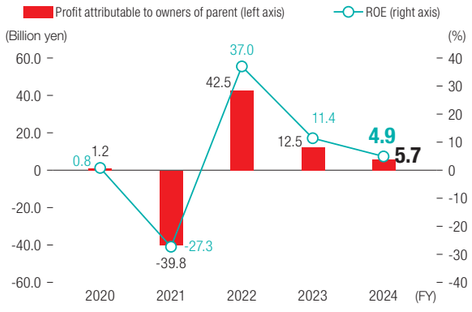
As an outside director, I must remain aware of my role in improving the effectiveness of the Board of Directors. In other words, I must determine whether the Board agenda contributes to increasing corporate value and whether meaningful discussions are taking place. I will do my best to encourage the company to visualize future narratives, not only in terms of the connection between economic value, social value, business, and sustainability viewed as generally important, but also in terms of a global, medium- to long-term view of the political, economic, social, technological, and environmental aspects of the business—including potential business areas in the future.

Financial Highlights

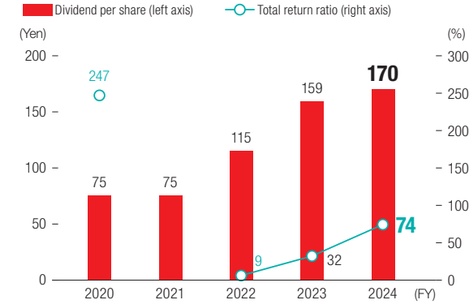
Net Sales, Operating Profit, Operating Profit Ratio



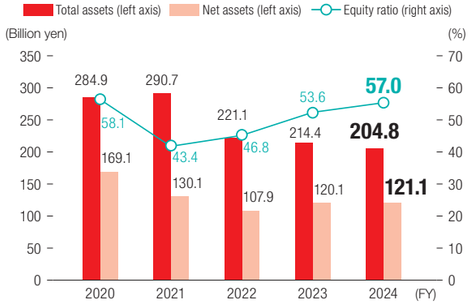
Profit Attributable to Owners of Parent, Return on Equity (ROE)



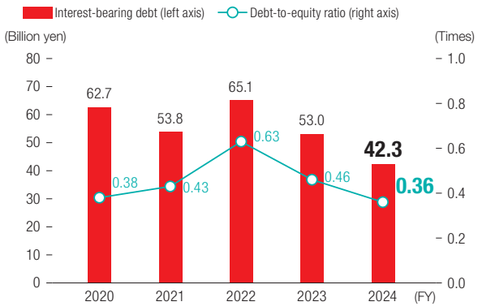
Dividend Per Share, Total Return Ratio



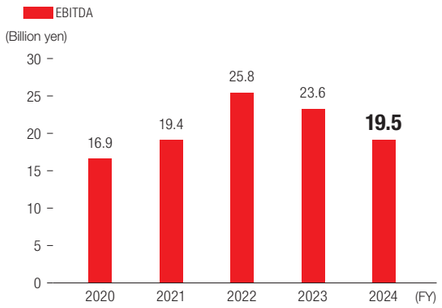
Total Assets, Net Assets, Equity Ratio



Interest-Bearing Debt, Debt-to-Equity Ratio

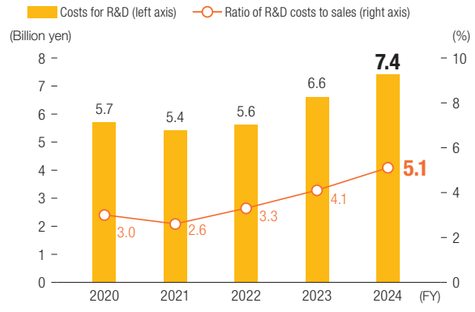


EBITDA (Operating Profit + Depreciation)

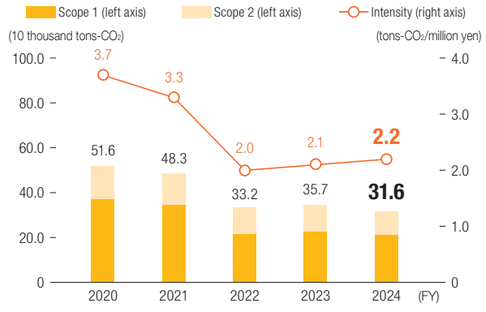


Non-Financial Highlights

R&D Costs, Ratio of R&D Costs to Sales

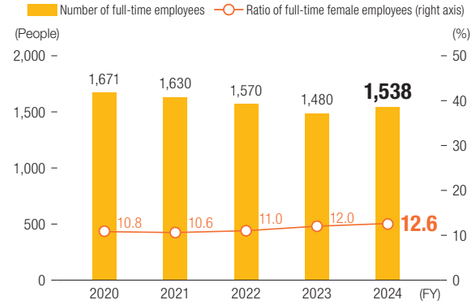


GHG Emissions (Scope 1 and 2)



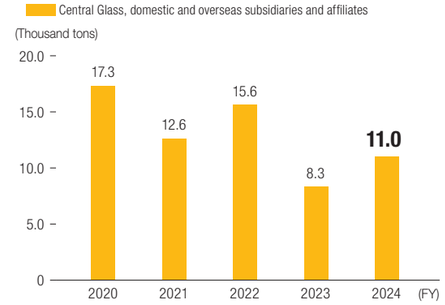
* Excluding data for the overseas auto glass operations that were transferred (FY2020–FY2021)

Full-Time Employees, Ratio of Full-Time Female Employees

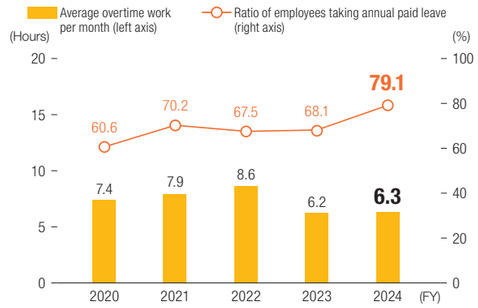


* Non-consolidated employees
* Began including secondees from FY2023 onward

Final Disposed Amount of Industrial Waste

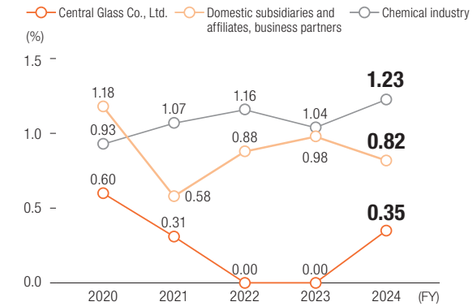


Average Overtime Work per Month, Ratio of Employees Taking Annual Paid Leave



* Non-consolidated employees

Lost-Time Incident Rate



11-Year Financial Summary

Unit: Million yen

Key Financial Data	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
Net sales	199,010	235,361	228,898	227,810	229,901	222,469	190,673	206,184	169,309	160,339	**144,233**
Chemicals	87,781	82,358	78,672	81,196	79,163	78,232	78,274	94,345	114,625	100,926	**85,765**
Glass	111,228	153,002	150,226	146,613	150,737	144,236	112,398	111,838	54,684	59,413	**58,467**
Operating profit	11,542	13,947	12,982	6,039	10,135	7,975	4,064	7,262	16,757	14,526	**10,629**
Chemicals	12,169	13,805	11,202	9,998	9,648	7,951	7,084	9,778	14,095	10,588	**8,166**
Glass	-623	137	1,780	-3,958	487	24	-3,020	-2,515	2,662	3,938	**2,462**
Ordinary income	14,321	14,615	15,091	6,327	11,169	8,565	4,749	11,936	19,637	16,269	**12,164**
Profit attributable to owner of parent	10,393	10,047	10,703	2,980	7,577	6,418	1,230	-39,844	42,494	12,478	**5,678**
Total assets	282,139	277,627	314,045	316,846	307,103	296,427	284,906	290,696	221,090	214,404	**204,834**
Net assets	156,580	159,946	172,950	175,628	168,931	164,339	169,083	130,063	107,861	120,050	**121,063**
Cash and deposits	19,676	19,372	31,342	22,673	21,732	26,256	27,975	28,216	17,844	21,000	**25,483**
Interest-bearing debt	55,960	55,427	73,473	71,029	73,350	72,109	62,704	53,848	65,092	53,006	**42,321**
Capital investment	12,348	20,346	24,903	20,240	20,125	11,935	7,649	9,514	7,061	6,147	**7,881**
Depreciation	9,287	10,675	10,578	12,148	12,596	12,930	12,850	12,182	9,029	9,117	**8,888**
R&D costs	5,780	5,613	5,496	5,801	5,809	5,866	5,744	5,448	5,638	6,642	**7,390**
Equity ratio	54.4	56.3	54.1	54.4	53.8	54.3	58.1	43.4	46.8	53.6	**57.0**
D/E ratio (times)	0.36	0.35	0.43	0.41	0.44	0.45	0.38	0.43	0.63	0.46	**0.36**
ROE (%)	7.2	6.5	6.5	1.7	4.5	3.9	0.8	-27.3	37.0	11.4	**4.9**
Net assets per share (yen)	3,688.81	3,804.85	4,156.13	4,255.09	4,083.74	3,978.44	4,091.41	3,115.69	4,176.04	4,637.42	**4,709.77**
Net income per share (yen)	248.42	242.00	261.02	73.45	187.23	158.59	30.40	-984.58	1,222.21	503.55	**229.14**
Dividend per share (yen)	9	10	11	30	75	75	75	75	115	159	**170**
Dividend payout ratio (%)	18.1	20.7	21.1	68.1	40.2	47.3	246.7	–	9.4	31.6	**74.2**
Price-earnings ratio (PER) (times)	11.41	12.62	9.08	33.74	12.98	11.87	77.50	–	2.40	5.76	**14.16**
Price-book value ratio (PBR) (times)	0.77	0.80	0.57	0.58	0.60	0.47	0.58	0.67	0.70	0.63	**0.69**
Cash flow from operating activities	13,082	24,235	17,331	16,351	12,650	17,226	17,918	14,872	16,599	22,236	**23,587**
Cash flow from investing activities	-23,366	-20,883	-21,442	-19,778	-14,336	-7,856	-3,737	-1,839	19,958	-3,338	**-4,244**
Cash flow from financing activities	8,611	-3,629	15,463	-5,128	291	-5,295	-13,121	-12,744	-47,039	-15,971	**-17,567**
Stock price at fiscal year-end	567	611	474	2,478	2,430	1,882	2,356	2,087	2,937	2,902	**3,245**

* Central Glass Co., Ltd. conducted a 5-for-1 reverse stock split for common shares on October 1, 2017. Accordingly, per-stock information above has been adjusted retroactively, assuming the reverse split occurred prior to October 1, 2017.

Corporate Information (as of March 2025)

Corporate Outline

Corporate Name	Central Glass Co., Ltd.
Established	October 10, 1936
Head Office	Kowa-Hitotsubashi Bldg., 7-1 Kanda-Nishikicho 3-chome, Chiyoda-ku, Tokyo, 101-0054 Japan (Registered Head Office: 5253 Okiube, Ube City, Yamaguchi)
Capital	18,168 million yen
Business Fields	Electronic materials, medi-chemicals, energy materials, applied chemicals, and fertilizers Architectural glass, automotive glass, and glass fiber
Employees	Consolidated: 3,354 Non-consolidated: 1,395
Net Sales	Consolidated: 144.2 billion yen Non-consolidated: 52.3 billion yen

Production Bases, R&D Bases, and Main Subsidiaries and Affiliates

Production Bases	Ube Plant Ube Plant Kawasaki Manufacturing Site
Research Centers	Fundamental Chemical Research Center Applied Chemical Research Center New-STEP Research Center
R&D Bases	Electronic Materials Research Center Taiwan Shonan Research Center
Subsidiaries and Affiliates	Central Chemical Co., Ltd. Central Glass Czech s.r.o. (Czech) Giga Gas & Electronic Materials Company (Taiwan) JCEL Co., Ltd. (South Korea) Central Glass Chemspec Company Ltd. (China) Central Glass Trading (Shanghai) Co., Ltd. (China) Tosho Central Co., Ltd. Central Engineering Co., Ltd. Central Glass Products Co., Ltd. Central Glass Sales Co., Ltd. Central Glass Engineering Co., Ltd. Central Glass Plant Services Co., Ltd. Central Saint-Gobain Co., Ltd. Mie Glass Industry Co., Ltd. Japan Tempered & Laminated Glass Co., Ltd. Central Glass Fiber Co., Ltd.

Ube Plant

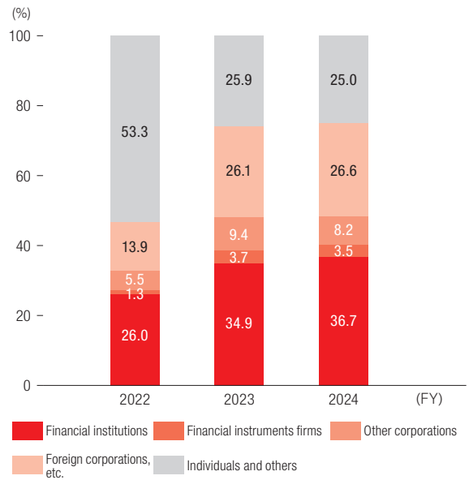
Applied Chemical Research Center and New-STEP Research Center (Ube)

Fundamental Chemical Research Center and New-STEP Research Center (Kawagoe)

Stock Information (as of March 2025)

Stock and Shareholder Information

Listed Stock Exchange	Tokyo Stock Exchange (Prime Market)
Securities Code	4044
Total Number of Authorized Shares	171,903,980 shares
Number of Shares Issued	26,000,000 shares (including 713,806 treasury shares)
Number of Shareholders	14,226 persons



Principal Shareholders

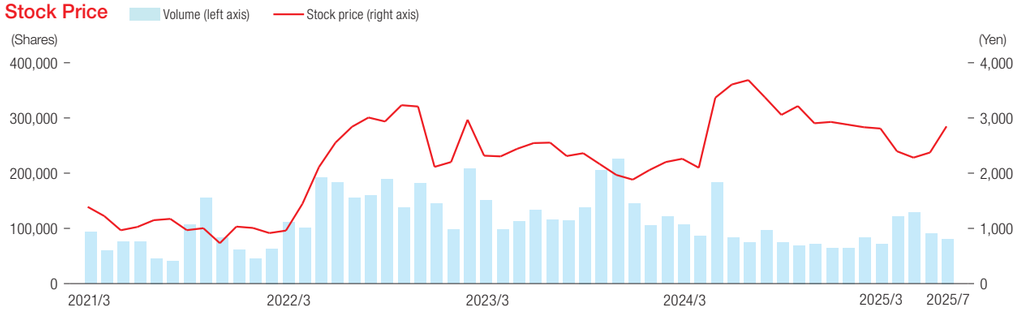
Shareholder	Number of Shares Held (thousand shares)	Shareholding Ratio (%)*
The Master Trust Bank of Japan, Ltd. (Trust Account)	3,325	13.15
Custody Bank of Japan, Ltd. (Trust Account)	2,035	8.05
The Yamaguchi Bank, Ltd.	640	2.53
CG Cooperation Company Shareholding Association	561	2.22
CG Business Partner Shareholding Association	551	2.18
DFA INTL SMALL CAP VALUE PORTFOLIO	537	2.12
Mizuho Trust & Banking Co., Ltd. as trustee for Retirement Benefit Trust of Mizuho Bank, Ltd. (re-entrusted by Custody Bank of Japan, Ltd.)	500	1.98
Mizuho Bank, Ltd.	500	1.98
The Master Trust Bank of Japan, Ltd. (as trustee for Retirement Benefit Trust of The Yamaguchi Bank, Ltd.)	447	1.77
STATE STREET BANK AND TRUST COMPANY 505001	429	1.70

* The shareholding ratio is calculated after deducting the number of treasury shares.

Dividend and Dividend Payout Ratio

FY	Dividend (yen)	Dividend Payout Ratio (%)
2020	75	246.7
2021	75	–
2022	115	9.4
2023	159	31.6
2024	170	74.2

Stock Price



Total Shareholder Return (TSR)

(%)

	FY2020	FY2021	FY2022	FY2023	FY2024
Total shareholder return (TSR)	129.2	118.9	170.1	176.7	204.0
Comparison index: TOPIX (including dividends)	142.1	145.0	153.4	216.8	213.4