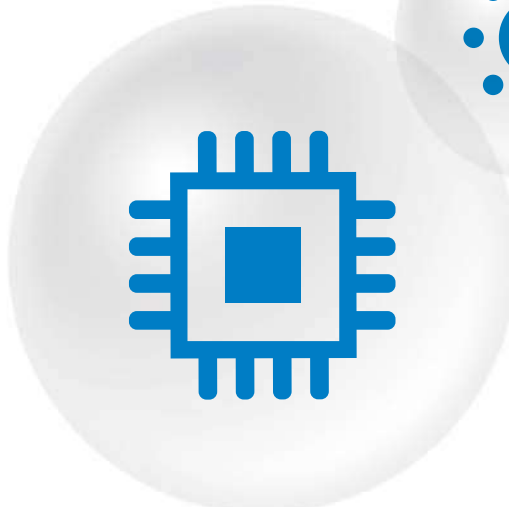
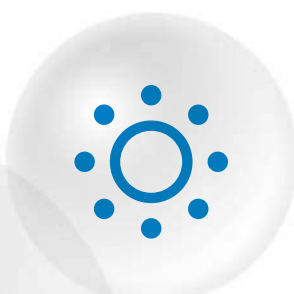




INTEGRATED REPORT

2022

For the year ended December 31, 2022



GLASS FOR FUTURE

At Nippon Electric Glass, our corporate philosophy is a reflection of our founding mission, a statement of our devotion to creating products infused with the very best of human civilization for the betterment of society.

Our corporate philosophy

We strive to build a brighter the world by uncovering the of glass for more advanced

Firmly rooted in the traditions of our founding mission, the NEG corporate philosophy plots a path for our quest for sustainable growth.

Thanks to material design, melting, forming, and processing technologies, glass can be infused with different properties for a broad range of functions.

We are dedicated to unlocking glass's potential to make life better and more comfortable for people and communities the world over.

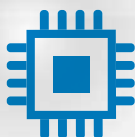


Our vision

The world's leading manufacturer of special glass

Our goal is to become the world's leading manufacturer of special glass, with the best talent, the best technology, and the best creative manufacturing ability. At the same time, we strive to run our company in a way that inspires pride among our workers and enables us to make a genuine contribution to the community.

The way we see it, creative manufacturing is achieved through state-of-the-art technological development, the highest quality standards, efficient production, and a steady supply of products, all underpinned by a fundamental dedication to environmental sustainability.



CONTENTS

About Nippon Electric Glass

Message from the Chairman	2
Message from the President	4
History of Transformations and Advances	8
Products and Business Fields	10
Financial and Non-financial Highlights	14

Value Creation Story

Value Creating Process	16
Strengths of Nippon Electric Glass	18
Value Chain	20
Research and Development	22



future for unlimited possibilities creative manufacturing.

Customer first

Everything is based on accurate understanding and complete satisfaction of customers' requirements.

Our values

Get the job done

We are dedicated to completing every task properly.

Broad minds and open communication

We think beyond existing norms and encourage frank communication among all departments and generations.

High ethical standards

We are bound to act ethically and in good faith in all situations.

Consideration for the environment

We are constantly aware of the need to be considerate of the environment, and strive to reduce our footprint.



Value Creation Strategies

Business Overview	
Display-related Business	26
Optical and Electronic Device-related Business	28
Glass Fiber-related Business	30
Medical Care, Heat Resistance, and Building Material-related Business	32

The Foundation of Value Creation (ESG)

CSR Foundation	34	Management	52
Environment	36	Compliance and Risk Management	54
Diversity and Inclusion	42	Communicating with Stakeholders	55
Community Contribution	45		
Corporate Governance	46		
Roundtable Discussion of the Outside Directors	48		

Financial and Corporate Information

Consolidated Financial Data from the Past 10 Years	56
Corporate Information	58

Message *from the Chairman*



Dr. MATSUMOTO

Motoharu Matsumoto
Chairman of the Board

Implement strong governance to raise corporate value

I have had a wide range of responsibilities in my 40 years with Nippon Electric Glass. I started in overseas sales of glass for CRTs and worked for 10 years on the management teams of European and American subsidiaries. After returning to the head office, I was general manager of the Finance Division and head of the display business before becoming president in 2015 and chairman in 2023. As I open this new chapter in my career, I look forward to using my experience in various company departments to fulfill my duties and meet your expectations.

The role of corporations in society is constantly changing. What's important is that we understand current changes, be sensitive to future changes, and make it a point to change ourselves along the way. I believe we must keep moving ahead by always asking ourselves why we exist as a company. The foundation of our corporate philosophy is a desire to contribute to the creation of a brighter future, and we must remember that we cannot achieve this—nor can we provide value to society—without strong governance in our management. Governance means internal control through the creation and proper implementation of rules and mechanisms. In areas where rules are hard to apply, it also means making judgments and taking action based on decency and ethics. And it means avoiding—and fixing when necessary—actions that negatively impact or cause stress for our stakeholders.

In this way, with governance crucial to all aspects of a company's activities, we must always be aware that just a single failing can lead to an overall collapse. There is a well-known theory in industrial accidents called Heinrich's law. It states that for every accident

that causes a major injury, there are 29 accidents that cause minor injuries and 300 that cause no injuries. We must apply the same way of thinking in governance. This means we should be aware that if a major risk rears its head, there are also anywhere from several dozen to several hundred other risks that exist. I would like to take a balanced approach to governance in which we conduct risk management through 'defensive' measure while also growing the company through bold 'offensive' measures.

The company exists thanks to the support of our many stakeholders. First among those are our employees—our human capital. Over the years, our employees have come to share questions such as what the company is aiming for, and what values we should prioritize. I believe that we must continue to build an environment in which our employees can take on challenges in a safe space. Such an environment requires the building of systems and organizational structures. While these are critical, they must also be infused with a sense of spirit.

In 2023, we established a CSR Committee to deliberate on a wide range of CSR and sustainability issues. In addition to leveraging this cross-organizational committee, we will raise awareness of governance among the Board of Directors, Management Committee, and other bodies, thus furthering discussions and actions related to sustainability. The ultimate aims are to raise satisfaction among all stakeholders, make company activities more sustainable, boost corporate value, and provide greater value to society.

Message *from the President*



Fortify existing businesses and propel new development to become the world's leading manufacturer of special glass

A. Kishimoto

Akira Kishimoto
President

My mission: Create future pillars of business

On January 1, 2023, I was appointed the ninth president of Nippon Electric Glass (NEG). Let me tell you a little about myself.

I joined the company in 1985 and began working in the Electronic Products Division, established in 1984. Our core business at that time was glass for CRTs, but technologies such as fiber optics and products such as digital cameras were starting to come out. Thus began my career as an engineer developing new glass applications, and I spent the next 32 years in that division. My numerous experiences during that time included being dispatched to the University of Toledo in Ohio, the U.S., where our company had established an NEG endowment course, and getting the opportunity to do fundamental research into glass. I became group general manager of NEG's Electronic Products Group, and later on group general manager of the Consumer Glass Products Group, a position I held until my current one. I believe my mission is to leverage these experiences and successes to propel

development and to grow other products besides display glass and glass fiber into the third and fourth pillars of business.

Since becoming president, there are two things I have said repeatedly to employees. The first is, "Dispel customer concerns." Our overseas customers in particular worry that a change in company leadership means a change in policy. I tell employees to put customers at ease by assuring them there will be no major changes in NEG policy and that our relationship with them will continue as always.

The second thing I tell them is, "Focus on existing businesses." Of course we are aggressive in our R&D towards the creation of new businesses, but this is on the condition that existing businesses continue smoothly and receive proper funding, and that we have in place a solid business foundation. Only then—based on our three-pronged system of material development, process technology development, and commercialization—will we press forward with developing new products and technologies.

Cataclysmic world events shape the first year of EGP2026, our Medium-term Business Plan

I think that many people believed that 2022 would see the world make great strides, what with the end of the pandemic in sight. But these hopes were soon dashed with Russian's invasion of Ukraine on February 24, 2022. The biggest effect on NEG was the havoc wreaked on the supply chain. Raw material and fuel prices skyrocketed, and this was preceded by difficulty in procuring raw materials. Even if just one of the dozens of necessary raw materials could not be procured, we could not make our glass products. There have even been times when it looked like we might not be able to continue manufacturing.

Against this background, in 2022, the first year of the EGP2026 Medium-term Business Plan, net sales were up 11.2% year on year to 324.6 billion yen. Contributing factors included price revisions, a weaker yen, and surcharges. However, a worsening market led to lower-than-expected sales volume. Operating profit was down 20.1% year on year to 26.1 billion yen. Among the reasons for this were sharp rises in raw material and fuel prices and distribution costs, a progressively weaker yen, and a higher cost of sales caused by a lower capacity utilization rate mainly in display glass. Despite efforts

to offset losses on steep cost increases through price revisions and surcharges, a rapidly weakening yen and a lower capacity utilization rate proved too much and stifled profits.

By business field, the display business slowed in response to customers' production adjustments. However, to meet the needs of expected demand increases in China in the long term, we established an integrated production system at our Xiamen plant in China for 10.5-generation glass (approx. 3 m by 3.3 m). This system can handle everything from glass melting and forming to processing. As well, there are high expectations for the electronic components business, where performance has been strong in semiconductor support glass suitable for the latest semiconductor production processes. In the glass fiber business, although shipments dropped overall due to a downturn in the automobile industry, shipments have remained firm in construction applications in the U.S. In Malaysia, new highly efficient production facilities have gone onstream. In the consumer glass business (medical care, heat resistance, building materials), although demand softened for glass tubing for pharmaceutical use and heat-resistant glass in the fourth quarter, factors such as a weaker yen helped boost net sales.

Message *from the President*

Hit the ground running in fiscal 2023 Catch demand trends early and then fully prepare

For fiscal 2023, we forecast net sales of 340 billion yen, operating profit and ordinary profit of 10 billion yen each, and profit attributable to owners of the parent company of 8 billion yen. The net sales forecast exceeds the previous year, but the operating profit figure is down sharply due to factors including skyrocketing raw material and fuel prices and a lower capacity utilization rate. However, we will work on all fronts to offset losses on costs by boosting productivity, cutting procurement expenses, rethinking raw materials, revising prices, and levying surcharges, in the process building a stable supply chain.

We predict that demand, which dropped last year, will gradually recover. In the display business, where we have been aggressively investing in order to strengthen the business platform in China, we will expand sales of 10.5-generation glass. In the glass fiber business, we will push ahead with the

development of products offering greater functionality and added value. In other businesses such as electronic components and consumer glass, we will strengthen our competitiveness through efforts including expanding sales and improving productivity in key fields.

We have no doubt that demand will rebound. And when it does, we must be ready to 'hit the ground running.' Before products can be shipped, it takes a certain amount of time for things like securing the necessary people and finishing and packaging the products. That is why we are now thoroughly preparing by keeping a close watch on all market trends, right up to final products, so that we are ready to act when the time comes. We are also in close communication with customers as we work together on the various products under development.

Creating new value and conducting environmentally friendly manufacturing

There is no doubt that fiscal 2023 will be a tough one due to the huge impact that the external environment has on performance items such as net sales and operating profit. However, I don't see any obstacles in the way of achieving the final goals of the EGP2026 Medium-term Business Plan (net sales of 400 billion yen, operating profit of 45 billion yen) if we do what needs to be done in our various businesses.

We are making steady progress with the five keys to our Medium-term Business Plan: strengthen the business platform, flexible investment, promote new businesses, promote carbon neutrality, and human resource strategy. Regarding new businesses, we have overcome a major hurdle towards practical development of all-solid-state sodium-ion secondary batteries, which we aim to bring to market in 2025. We have also launched our infiora™ jewelry glass, a first for us in this business field, and many are already using tiaras made with this product. The development technology achieves an ultra-high refractive index that realizes glass with brilliance and

clarity comparable to a diamond, and we foresee its application in fields such as augmented reality and virtual reality.

For carbon neutrality, we are working on numerous fronts to achieve 2030 CO₂ emission reductions of 36% over fiscal 2018 and zero emissions in 2050. For a glass manufacturer like NEG, reducing greenhouse gas emissions from melting furnaces is a key management task and one that we are making a top priority. A key focus for us here is increasing electricity usage for glass melting furnaces on the way to shifting from gas-powered to all-electric melting furnaces. All-electric melting furnaces are extremely energy efficient and environmentally friendly, but require advanced technology in order to melt glass of varying compositions. NEG is already using all-electric melting furnaces in the display business and is currently developing technologies to expand their use to other products as well. In addition, our bases are being equipped with solar power systems and aggressively

incorporating renewable energy. Our company is rooted in its corporate philosophy of creating products infused with the best of human civilization for the betterment of society. My hope is to continue developing with an environmental awareness towards the realization of a sustainable society, and to create products that contribute to what will eventually be a carbon negative society.

In strategizing human resources, no matter how much AI advances, people are still the backbone of our business and our most important asset for generating value. Besides in-house human resource development, other measures to achieve a diverse and vibrant workforce include aggressively hiring experienced mid-career personnel and foreign nationals, and empowering our female employees.

Steadily implement a growth strategy to strengthen our presence in industry

As I have said, despite ongoing unpredictability in today's world, we are steadily implementing a growth strategy aimed at achieving the goals of EGP2026. I can assure our stakeholders that all is well with NEG. Former president (now chairman) Motoharu Matsumoto's business policy of strengthening our corporate structure will carry on under the slogan of the Medium-term Business Plan: Strong Growth. As long as we become a stronger company, we can be competitive in the global market. Our aim is to be the world's leading manufacturer of special glass by continuing to grow existing businesses and by carrying out high-value-added development that includes products in downstream sectors, pursuing alliances, mergers, and acquisitions where necessary.

Finally, a word about our financial and shareholder return policies. Today, the economy and companies are greatly impacted by things like geopolitical risks, technological innovations, and climate change. To ensure that its business can carry on, NEG strives to maintain a sound and solid

balance sheet and management based on asset efficiency. We strive for a solid financial foundation to ensure that shareholder dividends are stable long term and affected as little as possible by year-to-year performance fluctuations. We aim for—and have achieved for the past 20 years—a 2% or higher dividend on equity ratio. NEG will continue to do everything it can to give back to shareholders. We ask for your continued support in our mutual prosperity.



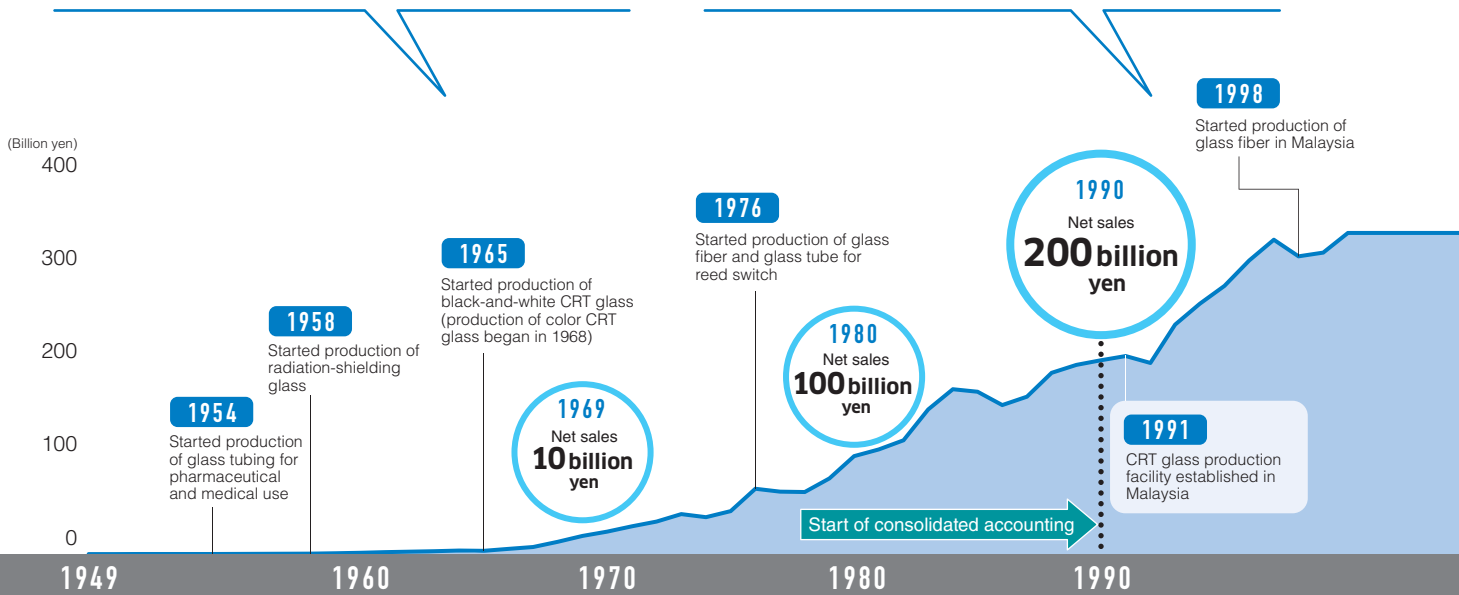
History of Transformations and Advances

Applying technologies to expand our business as a leading special glass manufacturer

We started out as a manufacturer of hand-blown glass for vacuum tubes for radios and after succeeding in automatic forming of tube glass, moved on to mass produce such products as glass tubes for fluorescent lighting. In 1965 we enlarged the scale of our business to include producing glass for CRTs. Businesses were launched around glass-ceramics, glass fiber, glass for electronic devices, and more.

Promoting global business as overseas markets expand

In the 1990s we set up a global production and supply system to meet global demand for CRTs, and grew into one of the world's leading CRT glass manufacturers. As LCDs started to become prevalent in the latter half of the 1990s, we made strategic preparations to adapt to the changing marketplace.



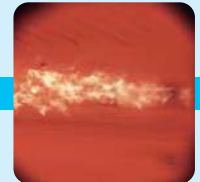
Technological Advances



1951
Automated production of glass tubing using the Danner process



1974
All-electric melting furnaces with no fuel-derived CO₂ emissions brought online



1993
Japan's first oxy-fuel firing furnaces brought online

Sustainability Transitions

1960
Introduced a melting furnace with electric melting process

1974
All-electric melting furnaces with no fuel-derived CO₂ emissions brought online

1993
Japan's first oxy-fuel firing furnaces introduced, resulting in a reduction of CO₂ emissions and improvement of heat efficiency

1998
Recycling system for glass collected from used TVs became operational

1971
Established Notogawa Plant; introduced cutting-edge environmental equipment (eco-friendly model factory)

1980
One of the first six firms in Japan to establish a special-purpose subsidiary company to employ people with disabilities

1994
Electronic Products Group acquired ISO 9002 certification for three product classes including powder glass

1999
Acquired ISO 14001 certification for all plants in Japan

Fiscal year ended December 31, 2022

Total

Net sales **324.6 billion yen**

Electronics and Information Technology

Net sales **148.7 billion yen**
Composition ratio **46%**

Performance Materials and Others

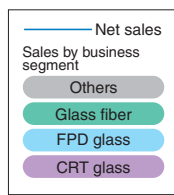
Net sales **175.8 billion yen**
Composition ratio **54%**

The end of the CRT and changeover to LCDs

To meet the rapid growth of the LCD market, in 2000 we started producing glass substrates for LCDs using an overflow process. Year by year we were able to produce larger, higher quality substrates to meet the demands for increasing complexity in the LCD market. Business also expanded in glass fiber for strengthening high-function plastics and glass tubing for pharmaceutical and medical use.

Building a new axis for growth to become the world's leading manufacturer of special glass

We acquired production facilities in Europe and the United States from U.S.-based PPG Industries to expand our glass fiber business. This business grew into a major business for the company alongside the LCD glass business. We also released new products such as cover glass for smartphones and a phosphor-glass composite, and developed unique products such as glass ribbon and glass with a zero CTE (coefficient of thermal expansion).



2002

LCD substrate glass processing facility established in Gumi, South Korea

2009

Started production of glass for chemical strengthening

2016

Acquired the European glass fiber business from U.S.-based PPG Industries

2013

Started production of Lumiphous™ phosphor-glass composite

2017

Acquired the U.S. glass fiber business from U.S.-based PPG Industries

2019

Started production of flat glass fiber

2000

2010

2020

2022



2000

Production of LCD substrate glass by applying the overflow process



2008

Roll-to-roll process achieved for ultra-thin (50 μm) sheet glass



2019

Establishment of an innovative manufacturing process in LCD glass

2000

Implemented Environmental Business Plan

2007

Concluded a comprehensive university-industry collaboration agreement with the University of Shiga Prefecture (ongoing)

2011

Developed reprocessing of dust collected from furnace exhaust gas into raw material at a plant in Japan

2018

Purchased carbon offset credits (J-Credit) issued by a forestry association in Shiga Prefecture to contribute to local environmental conservation (ongoing)

2021

Endorsed the TCFD recommendations

2006

Acquired ISO 17025 certification for reliable analysis of traces of environmentally harmful substances

2010

Fuel conversion (complete discontinuance of use of heavy oil and switch to LPG/natural gas), resulting in huge reduction in CO₂ emissions

2015

Participated in visiting lectures sponsored by Otsu City (ongoing)

2019

Certified with top rating (three stars) as a company embracing Shiga Prefecture Biodiversity Initiative (renewed in 2022)

2023

Established the CSR Committee

Business locations

9 countries and regions

Group companies

25

Overseas sales ratio

87%

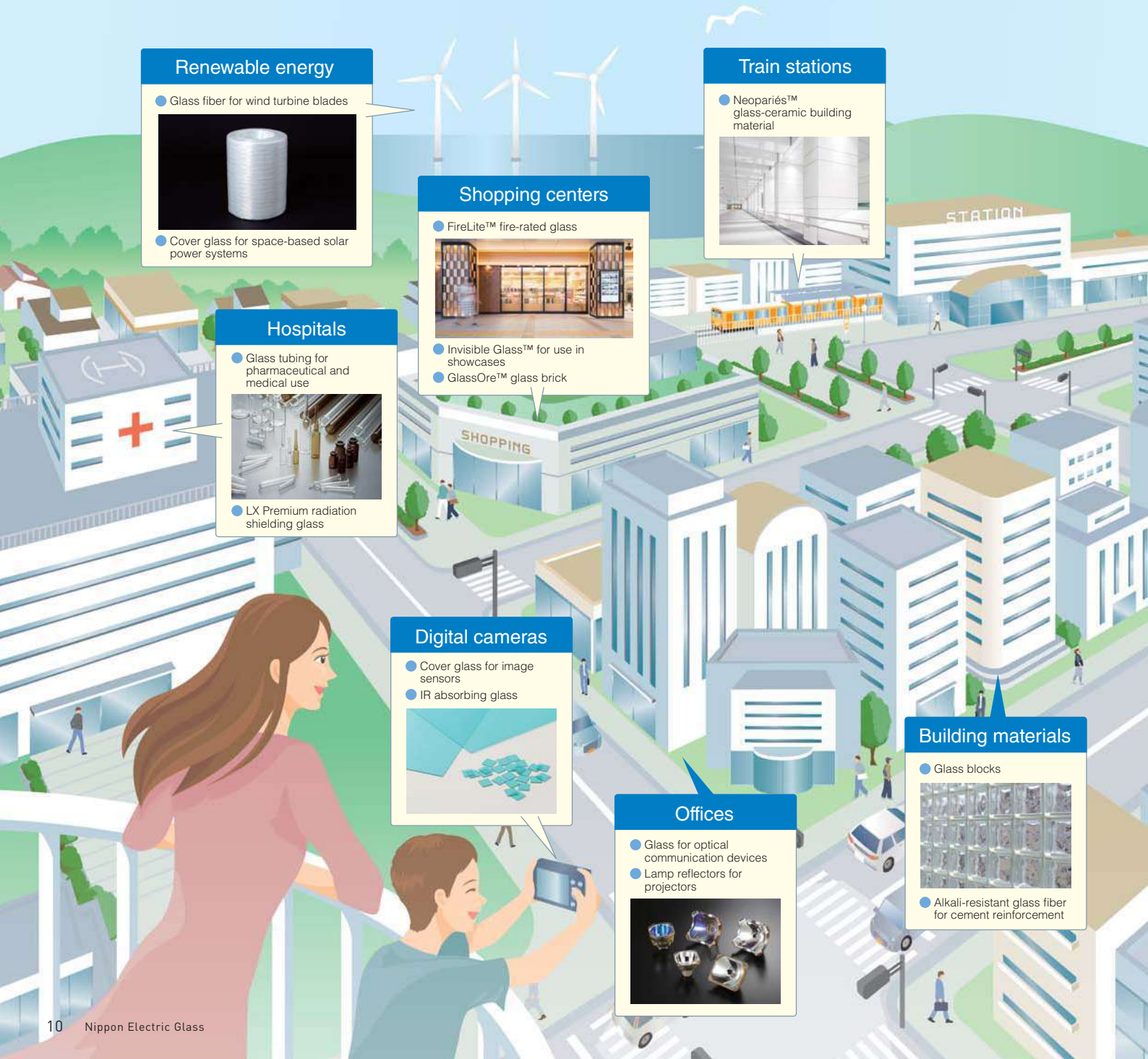
Products and Business Fields

The special glass products we develop are not always noticeable. Our glassware, however, a familiar product that makes life more comfortable, is used in our homes, offices, hospitals, and throughout the community.

Outside


Contributing to the sustainable growth of cities across many industries

In addition to the popular building materials and fire-rated glass we offer, our products are used for applications in many industries. For example, our glass tubing for pharmaceutical and medical use is in demand in the medical sector, while our materials for wind power generation are used by the energy industry.



Renewable energy


- Glass fiber for wind turbine blades



- Cover glass for space-based solar power systems

Train stations

- Neopariés™ glass-ceramic building material



Shopping centers


- FireLite™ fire-rated glass



- Invisible Glass™ for use in showcases
- GlassOre™ glass brick

Hospitals

- Glass tubing for pharmaceutical and medical use



- LX Premium radiation shielding glass

Digital cameras

- Cover glass for image sensors
- IR absorbing glass



Offices

- Glass for optical communication devices
- Lamp reflectors for projectors



Building materials

- Glass blocks



- Alkali-resistant glass fiber for cement reinforcement

Automotive

Supporting the evolution of motor vehicles with advanced technologies renowned for their reliability

As the goal of carbon neutrality becomes a global objective, reducing fuel consumption and improving the environmental performance of automobiles have become pressing issues. Our products help reduce the weight of vehicles while enhancing their safety.

1 Engine bay

- Glass fiber for strengthening functional plastics



- Powder glass for spark plugs
- Glass tubing for temperature sensors

2 Instrument panels

- Glass for display panels
- Dinorex™ glass for chemical strengthening



3 Roof liner materials

- Glass fiber mat



4 Front end

- Glass fiber for strengthening plastics
- Lumiphous™ phosphor-glass composite for LED headlights



- Glass valves for turn signals

5 Cameras and sensors

- Cover glass for image sensors



- Band pass filter for LiDAR
- Far-infrared transmitting glass

5 Smart room mirror

- Dielectric mirror (Half-mirror)



- Glass for display panels

Inside

Assured safety and security for daily life

To support the comforts of modern life, our products offer high resistance to heat, thermal shock, and environmental factors as well as high strength, low weight, and excellent electrical insulation, among other features.

Air conditioners

- Granulated glass for hermetic sealing
- Glass tubing for temperature sensors



Lighting

- Lumiphous™ phosphor-glass composite for LED lighting



- High-refractive-index glass substrate

Refrigerators

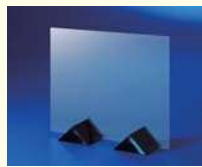
- Sintered glass tablet for hermetic sealing



- Glass tubing for reed switches
- Glass tubing for temperature sensors
- Antibacterial glass

Flat-panel TVs

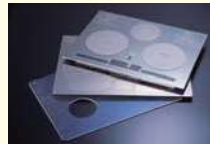
- Glass for display panels



- Gap spacers for LCD cells

Cooking appliances

- StellaShine™ heat-resistant glass-ceramics for top plates



- Glass tubing for temperature sensors

Stoves

- Neoceram for windows



Personal computers

- Glass for display panels
- Powder glass for chip parts



Smartphones

- Dinorex™ high-strength cover glass for protecting electronic devices



- Dinorex UTG™ glass film for chemical strengthening
- Cover glass for image sensors
- IR absorbing glass

Network

Supporting technological innovation in an increasingly sophisticated information-reliant society

Our glass must exhibit superiority in terms of optical properties, formability, workability, dimensional accuracy, and airtightness in order to improve the stability, reliability, and convenience of communication.

For high-speed optical transceivers

- 1 Telecommunications carrier stations
- 5 Data centers



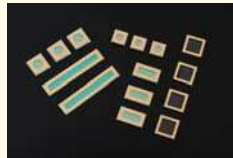
Micro lens arrays



Micro prisms



Square-type aspheric lenses



Glass windows for photonic devices

For WDM filter modules

- 1 Telecommunications carrier stations
- 5 Data centers



Micro capillaries



Precision glass tubes

For optical transceivers

- 1 Telecommunications carrier stations
- 2 Mobile phone base stations
- 3 Multi-unit residential buildings
- 5 Data centers
- 6 Housing
- 7 Office buildings



Ball lens caps



Ball lens with AR coating

4 Optical closures

5 Data centers

7 Office buildings

6 Housing

3 Multi-unit residential buildings

1 Telecommunications carrier stations

2 Mobile phone base stations

For reinforcement of optical fiber connections

- 4 Optical closures



Coupler housing for optical fiber

For submarine optical cables



CERSAT™

For optical connectors

- 1 Telecommunications carrier stations
- 5 Data centers

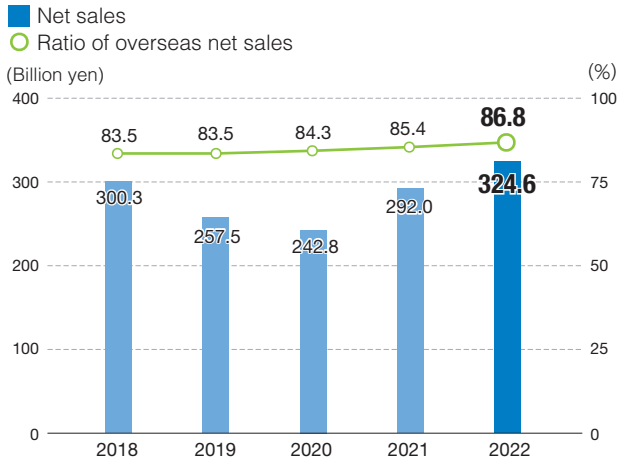


Glass ferrules
Glass-ceramic ferrules

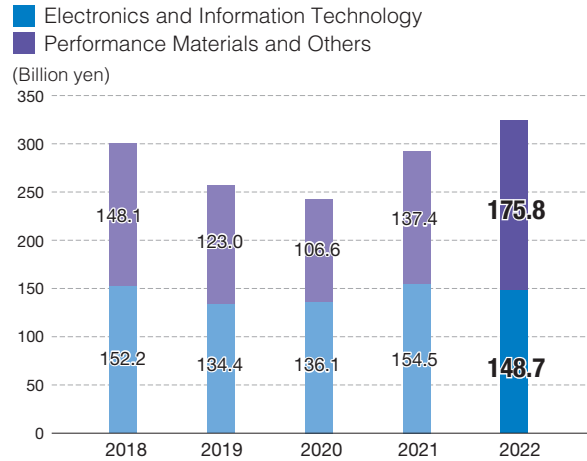
Financial and Non-financial Highlights

Financial Highlights (Consolidated)

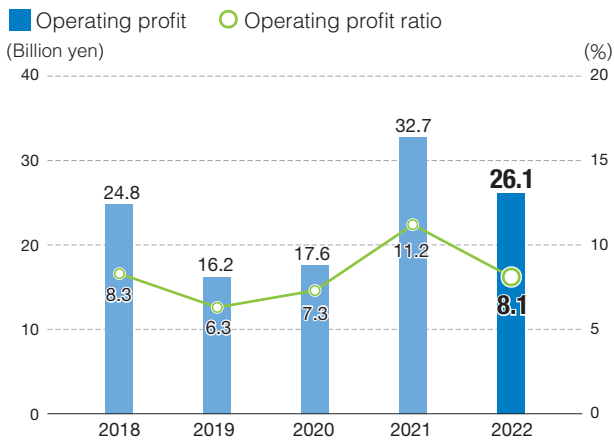
Net Sales, Ratio of Overseas Net Sales



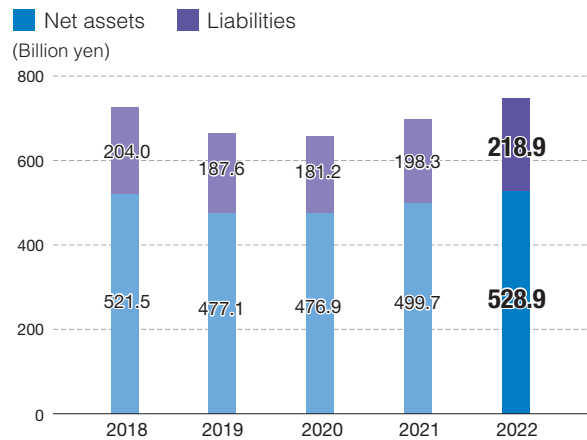
Sales by Business Segment



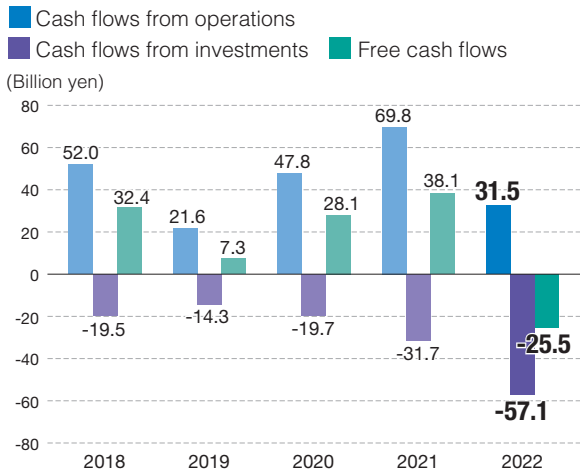
Operating Profit, Operating Profit Ratio



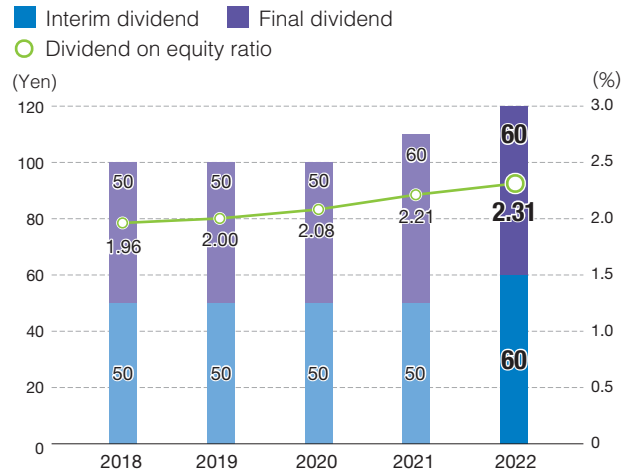
Net Assets, Liabilities



Cash Flows

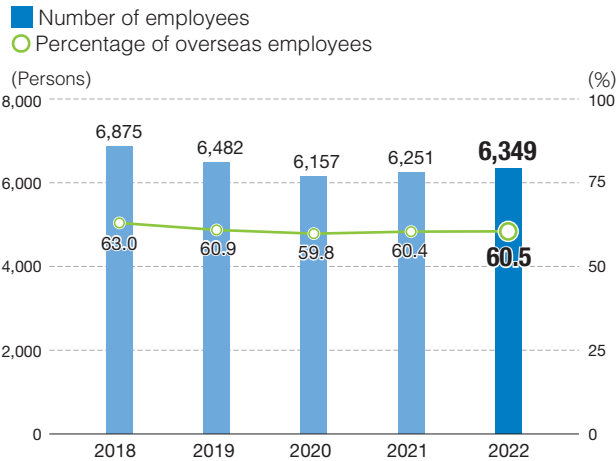


Cash Dividends, Dividend on Equity Ratio

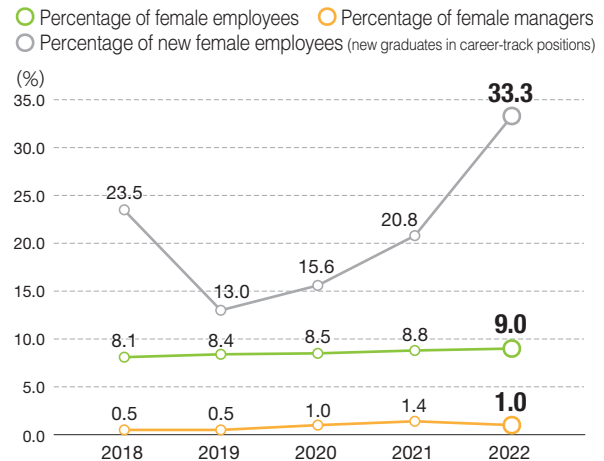


Non-financial Highlights

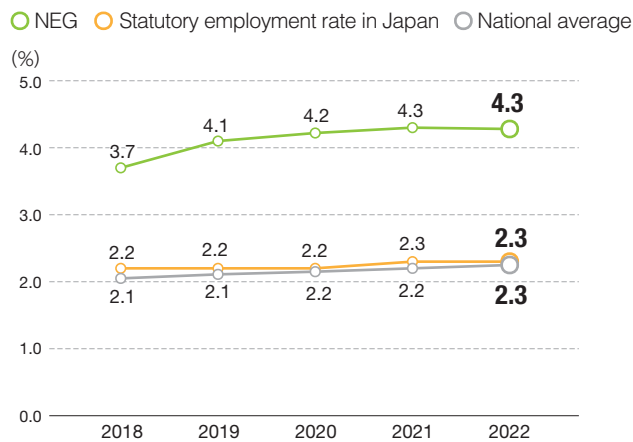
Number of Employees, Percentage of Overseas Employees (consolidated)



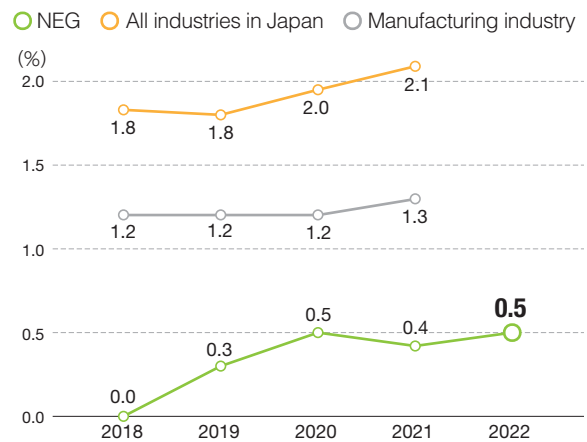
Percentage of Women (employees, managers, recruits) (NEG)



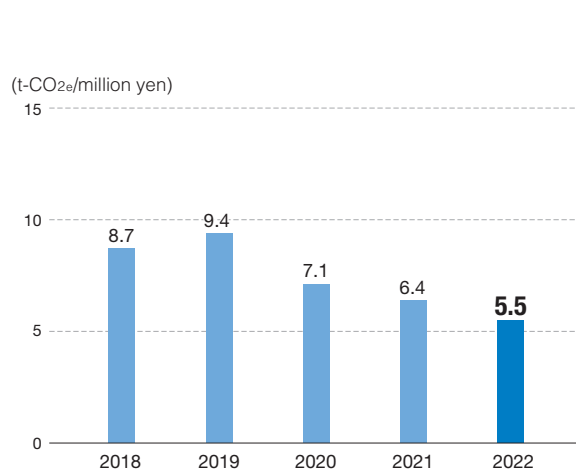
Percentage of Employees with Disabilities (NEG and consolidated subsidiaries in Japan)



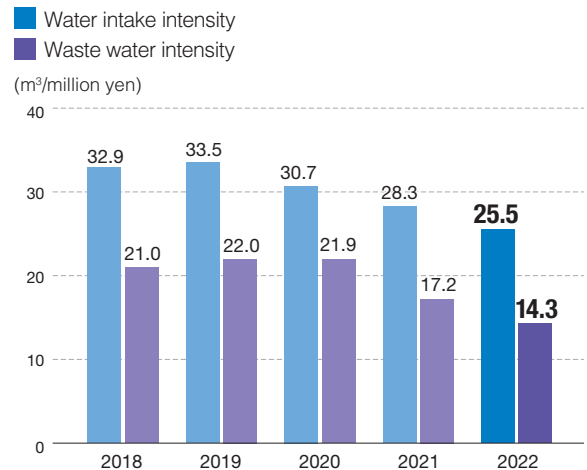
Industrial Accident Frequency Rate (NEG)



CO₂ Emissions Intensity (to consolidated sales)

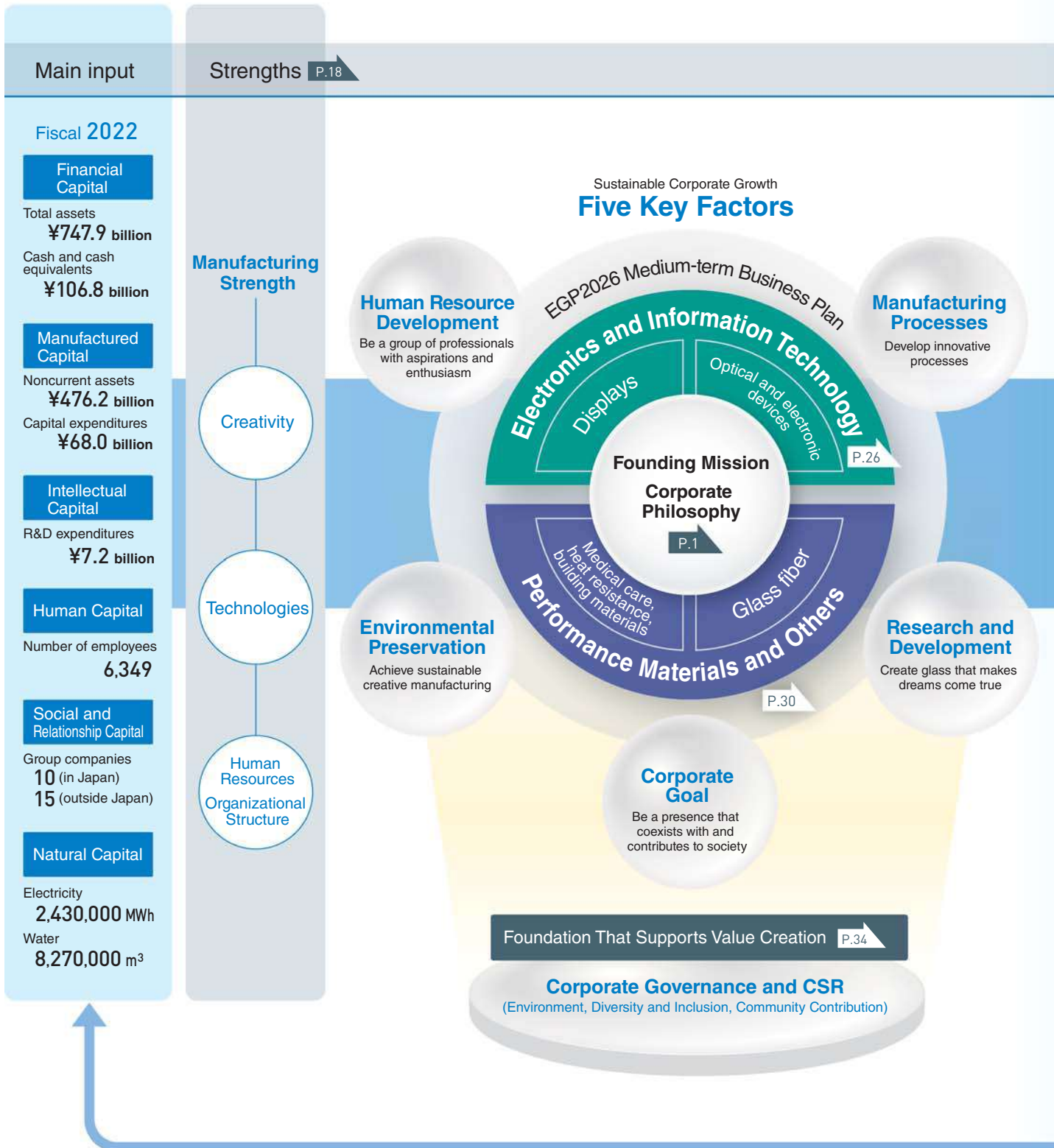


Water Intake/Waste Water Intensity (to consolidated sales)



Value Creating Process

Utilizing six resources of capital for our business operations, we pursue the unlimited possibilities of glass while providing value to society through our innovative products. We will continue our efforts to realize sustainable societies.



Product Areas **P.10**

Global Operations **P.58**

Main Output

Creation of Social Value

Our Goal **P.1**

- Automotive
- Energy
- Medical Care
- Semiconductors
- Displays
- ICT
- Social Infrastructure
- Home Appliances and Housing Equipment

- U.S.
- Europe
- Asia
- Japan

Fiscal 2022

Financial Results

Net sales **¥324.6 billion**

Operating profit **¥26.1 billion**

Cash dividends **120 yen/share per year**
(DOE 2.3%)

Intellectual Property

Number of acquired patents **3,281**

Diversity and Inclusion

Percentage of employees with disabilities **4.3%**

Health and Productivity Management Outstanding Organization
Certified 5 years in a row

Community Contribution

Number of participants in community activities
Approx. 360 people

Environment

Sales of environmentally friendly products
Approx. ¥110 billion

- Reduction of environmental impact
- Utilizing natural energy
- Innovations in ICT
- Advancements in medical care
- Improvements in safety and comfort of daily life
- Advancements in transportation
- Creating a robust and durable social infrastructure
- A fair work environment and human resource training to develop tomorrow's leaders
- Meeting society's challenges

SUSTAINABLE DEVELOPMENT GOALS

The world's leading manufacturer of special glass



Strengths of Nippon Electric Glass

Over the years, we have developed a wide range of glass technologies including material design and evaluation, melting, forming, and processing. These technologies are brought together in our production facilities, which are the foundation for the development of new applied technologies. It is through these technologies that we can create unique, high-function glass products.

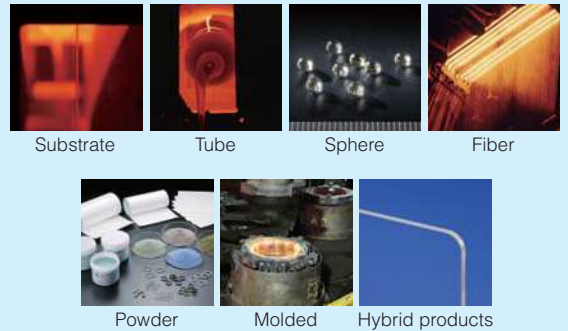
Manufacturing Strength

Creativity

Creating new value with glass that takes a variety of forms and functions

Glass is an exceptional material that takes a variety of forms and functions based on how the chemical elements are combined or formulated. The texture and luster are its best attributes. Glass from our production line takes many forms and shapes and is used in a wide variety of fields.

Variety of Forms



Technologies

Combining basic technologies and applied technologies for the commercialization of high-quality glass

We conduct basic research that covers material design and evaluation, process design and development, and commercialization. We also perform computational science research (including data analysis that utilizes AI and other technologies). We develop new products that take advantage of our precision forming and processing, and applied research on ultra-thin substrate forming.

Basic Glass Technologies

Material design and evaluation

Process design and development

Melting

Our melting technology and the design of our melting furnaces involve advanced and precise furnace operations—for example, controlling combustion and temperature while reducing environmental burdens. These technologies help us to produce high-quality glass.

Forming

One thing that sets us apart from the competition is our wide range of forming technologies. These technologies enable us to achieve high dimensional accuracy and high productivity. We can use the most suitable forming method for each product and respond to the various needs of our customers.

Human Resources and Organizational Structure

Responding rapidly with solutions for customers through organizational and employee competence

Since our founding, we have prided ourselves as glass manufacturers on an ethos of no-nonsense dependability. There is very little distance between top management and floor supervisors, and over the years we have maintained an open-minded corporate culture that values transparency. This atmosphere empowers our employees and gives us organizational strength, bolstering the company in many ways and supporting its growth.

Various Human Resource Development Programs

Multi-faceted opportunities for skill improvement, plus on-the-job training

OJT

+

- Level-specific training
- Skills training
- Global human resource training
- Self-development programs that include acquiring industry certification

Developing personnel capable of world-class performance in every challenge

Functions

Optical

Light absorption, wavelength conversion, optical thin film

Electromagnetic

Insulation, dielectric, conductive film, magnetism

Thermal

Heat resistance, fire prevention, low-temperature sealing

Mechanical

High strength by chemical strengthening or crystallization

Chemical

Acid resistance, alkali resistance, sustained release of chemicals

Others

Gas barrier, plastic and cement reinforcement

Processing

New functions and features are given to glass through a variety of working processes. These processes include reforming by heating and softening, crystallizing by firing, coating films, precision cutting and polishing, and compounding with crystals or organic substances.

Commercialization research

Applied Technologies

Precision forming and processing

Ultra-thin substrate forming

Hybrid technologies (use of thin film and laminating with other materials)

Ultra-large substrate manufacturing

Crystallization

Supporting Seed Technologies and Responding to Needs Organizationally

Research & Development Group

Process Development & Engineering Group

Business Group

Corporate Strategy Division

Marketing Division

Our well-coordinated system of development is facilitated by smooth information-sharing among the three groups and supported by the Corporate Strategy and Marketing Divisions

Value Creation Utilizing Our Strengths

Expanding the fields for our products to meet society's needs in a new era

Since our founding in 1949, our efforts have been focused solely on improving glass technologies, developing and supplying the products that each age demands, and expanding the domains for our efforts. Our aim going forward is to contribute to a better world through the manufacturing of the highest quality glass to meet society's needs.

Fields of Application and Markets



Automotive

- Lightweight materials
- Lighting
- Displays
- Driving automation (cameras, sensors, etc.)
- Electronic devices



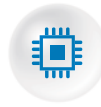
Energy

- Secondary batteries
- Renewable-energy systems



Medical Care

- Advanced pharmaceutical containers
- Advanced medical equipment and facilities



Semiconductors

- Next-generation semiconductor materials (small, high definition, high performance)
- Semiconductor manufacturing equipment



Displays

- High-performance displays (high definition, thin and lightweight, flexible)



ICT

- Optical communication devices (for next-generation high-speed communications)



Social Infrastructure

- High-function fire-rated equipment
- High-performance structural materials (safe, durable, lightweight)



Home Appliances and Housing Equipment

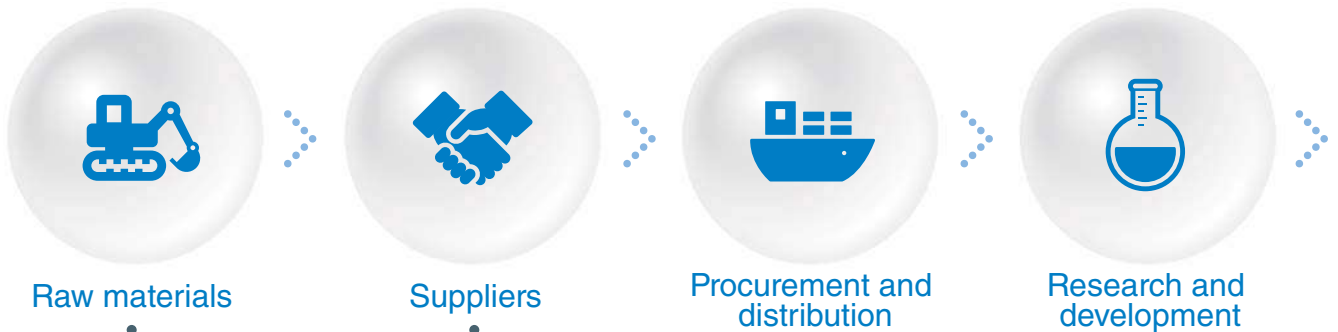
- High-function home appliances, housing materials
- Multifunction wall materials

Value Chain

In each process of the value chain, we strive to increase the positive effects of our business activities and minimize the negative effects. We will continue to work hand-in-hand with our stakeholders in order to raise corporate value, solve society's problems, and achieve the SDGs.

Increase positive effects

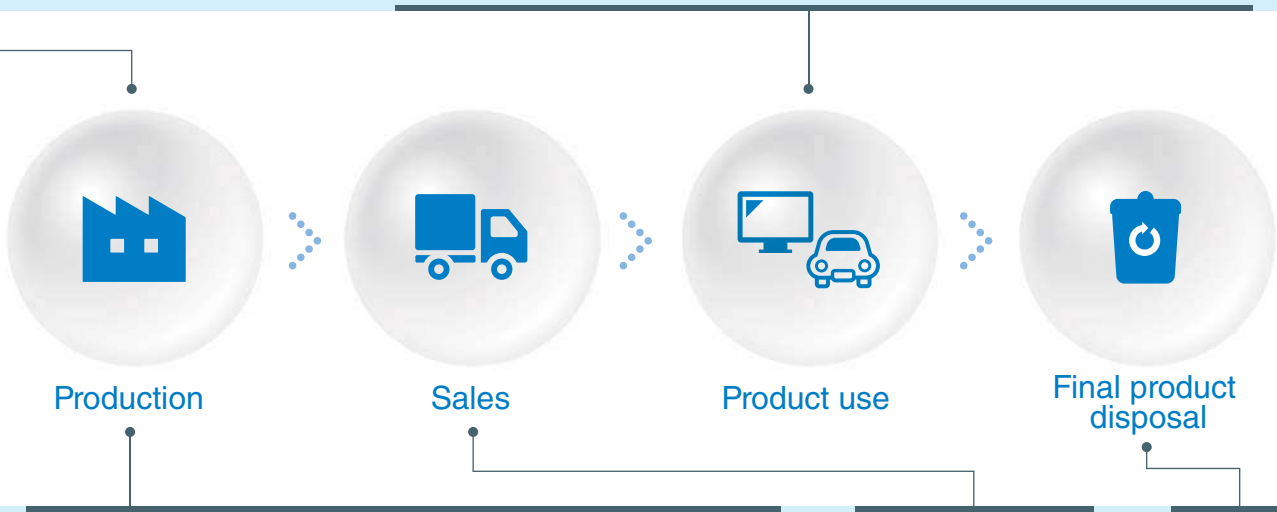
- 1** ● Donations to local communities
 - 2** ● Support for the socially vulnerable
 - 3** ● Health and productivity management
 - 4** ● Endowment courses at University of Shiga Prefecture and Kyoto University
 - Science education for schools (send NEG employees to teach)
 - Support for the Biwako Floating School
 - Factory tours
 - Hiring and training of the disabled
 - Systems for employee education and training, self-development programs
 - 5** ● Helping female employees reach their full potential
 - Support for raising the next generation
 - 8** ● Diversity initiatives
 - Contribution to cutting-edge science and technology
 - Occupational health and safety activities, work-style reforms
 - 16** ● Formulation and dissemination of our corporate philosophy structure
 - 17** ● Collaboration with Shiga Prefecture
 - Endowment courses at University of Shiga Prefecture and Kyoto University
- 



Minimize negative effects

- 12** ● Using resources effectively
 - Recycling water and raw materials
 - Reduction of environmentally harmful substances
 - 1** ● Avoiding use of conflict minerals
 - 8** ● Forbidding of child labor
 - 10** ● Compliance with the U.K.'s Modern Slavery Act
 - 16** ● Thorough enforcement of basic procurement policy (open and fair business dealings)
 - 7** ● Thorough enforcement of green procurement guidelines
 - 12** ● Recycling packaging
 - 13** ● Modal shift in procurement
- 

- 3**
 - Glass tubing for pharmaceutical and medical use
 - Radiation-shielding glass for patient diagnosis
 - Flat-panel detector glass for X-ray diagnostic devices
 - Antibacterial glass
- 7**
 - Glass fiber for plastics reinforcement to reduce the weight of automobiles
 - Glass fiber for plastics reinforcement for wind turbine blades
 - Glass substrates for FPDs, G-Leaf™ ultra-thin glass
 - Lamion™ lightweight composite material
 - Lumiphous™ phosphor-glass composite
- 9**
 - ARG Fiber for reinforcement in construction
 - Development and sales of glass for optical communication and electronic devices
- 11**
 - FireLite™ fire-rated glass for fireproof public facilities
 - Glass fiber for reinforcement in construction
 - Glass fiber for resin railroad ties



- 3**
 - Manufacturing using no harmful substances
 - Preventing pollution of the atmosphere, waterways, and soil
 - Health and safety activities
 - Employee health improvement activities

- 6**
 - Strict control of wastewater (protecting water quality)
- 14**

- 10**
 - Human rights initiatives
 - Committee on Human Rights Issues
 - Shiga Prefecture Human Rights Issues Liaison Committee (corporate board member)
 - Compliance with the U.K.'s Modern Slavery Act
 - Compliance with Japan's Equal Employment Opportunity Act



- 12**
 - Recycling water and raw materials
 - Capture and reuse of exhaust gas
 - Pursuit of highly efficient manufacturing
 - Extending the life of facilities

- 13**
 - Global warming mitigation measures (e.g., reduction of CO₂ emissions)
 - Environmental education

- 15**
 - Supporting local forestry association activities
 - Removal of invasive fish species in Lake Biwa
 - Forest conservation around factories

- 16**
 - Thorough compliance
 - Human rights initiatives



- 12**
 - Recycling packaging

- 13**
 - Modal shift in shipping
 - Joint shipping with customers (e.g., reciprocal utilization of trucks)



- 12**
 - Reuse of waste glass

Research and Development

Uncovering the Unlimited Possibilities of Glass

Glass is a unique material that can be customized into different shapes with a wide variety of functions by modifying its composition and altering the various forming and processing methods used. By combining our accumulated glass technologies with original ideas, we continue to deliver a variety of high-performance glass products matching contemporary needs.

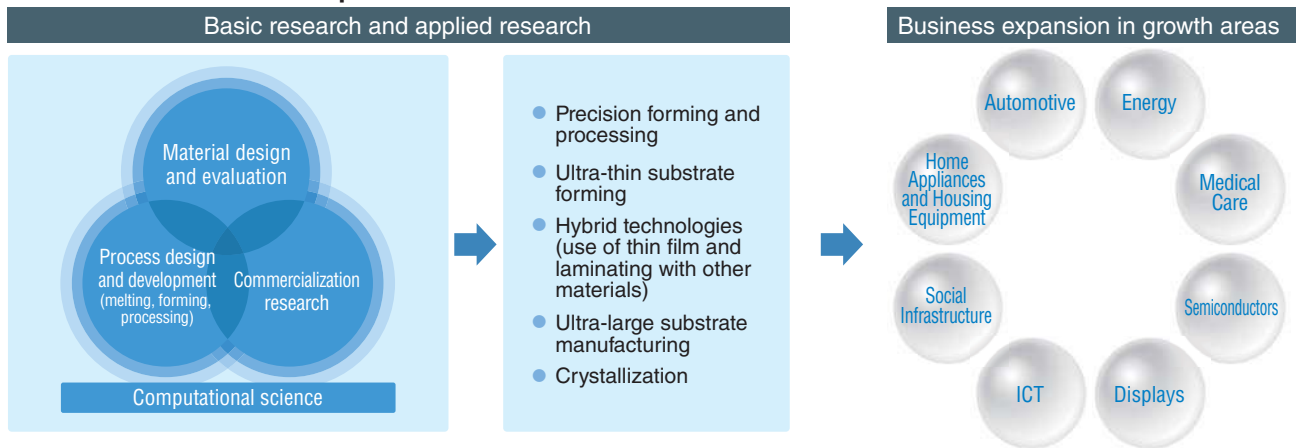
R&D Policy

We pursue basic research encompassing material design and evaluation, process design and development, commercialization built on trial production and product refinement, and computational science, which includes AI-driven data analysis. We engage in product development by combining basic and applied research such as precision forming and processing and ultra-thin substrate forming. Looking ahead to business development in growth areas such as automobiles, ICT, medical care, and displays, we have dedicated ourselves to developing glass that provides value to society.

Under our EGP2026 Medium-term Business Plan, we are committed to continuing with our fundamental R&D as a priority measure targeting the sustainable growth of our individual

businesses, categorizing this initiative as “strengthening the business platform.” In an effort to achieve our goal of carbon neutrality by 2050, we are working on our conversion to all-electric melting furnaces and on the development of using hydrogen and other CO₂-free energy sources. Among our strategic development initiatives, we are targeting next-generation technologies, products, and processes; environment-friendly products such as high modulus glass fibers for turbine blades in wind power applications; and an all-solid-state sodium-ion secondary battery. To commercialize these new products, we are concurrently developing products, technologies, and manufacturing processes in an integrated manner.

R&D and Business Development



R&D Organization

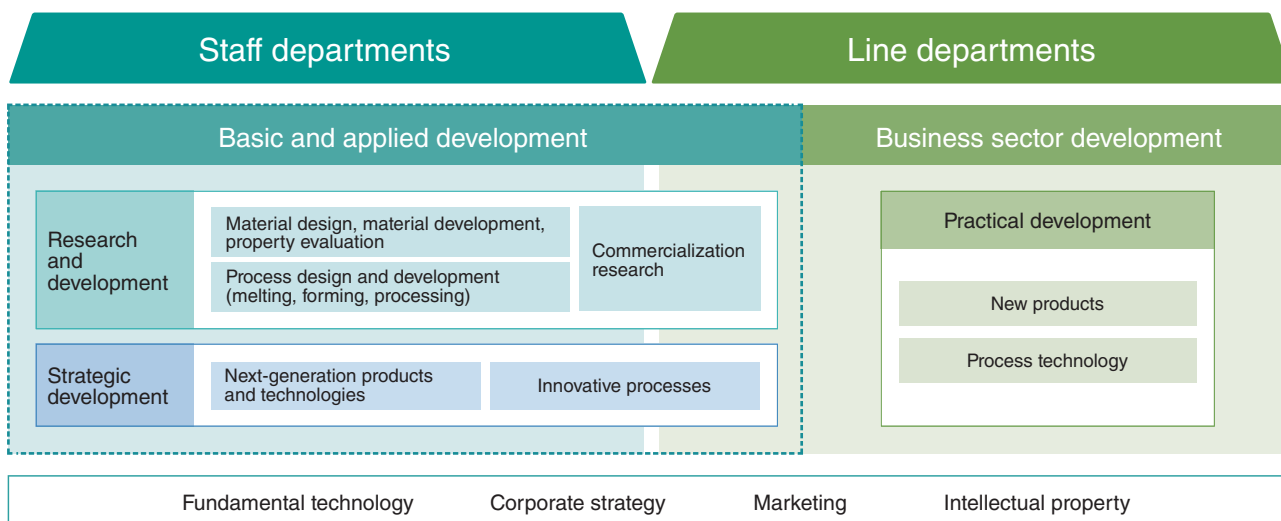
Our Research & Development Group and the Process Development & Engineering Group, as staff departments, engage in R&D in the areas of material design and development, property evaluation, and process design and development. Meanwhile, our line departments carry out practical development such as product commercialization, product improvement, and development of advanced functions.

The staff departments and the line departments collaborate on strategic development aimed at resolving medium-term development issues. Our Fundamental

Technology Division collaborates with institutions around the world in the area of material science, the foundation of our glass research. Our Corporate Strategy Division supports other departments in relation to information analysis and planning.

In order to commercialize the results of R&D more rapidly and in a broader manner as a company-wide marketing effort, the Marketing Division collects and analyzes information related to markets, products, and technologies; promotes our products and technologies; and disseminates information as a means of acquiring customers.

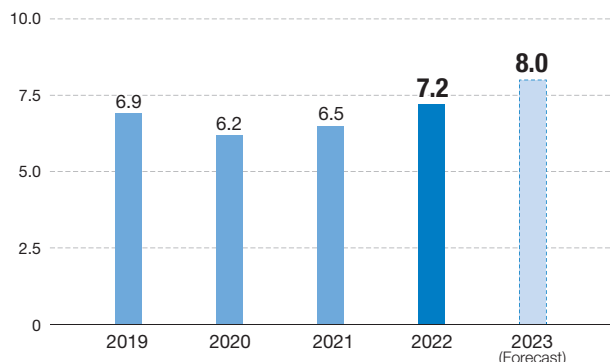
Collaboration between Departments



R&D Investment

We are working tirelessly in R&D in order to realize our corporate philosophy: "We strive to build a brighter future for the world by uncovering the unlimited possibilities of glass for more advanced creative manufacturing." We also aim to integrate and evolve our manufacturing processes and product development, and reflect the results in our management strategy in order to realize medium-and long-term growth. Our R&D expenditure was 7.2 billion yen in fiscal 2022. We will continue boosting our R&D activities.

R&D Expenditure (Billion yen)

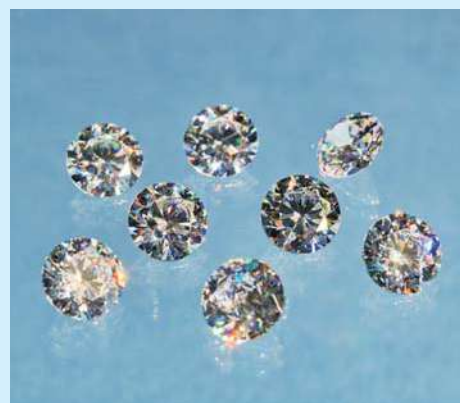


R&D News

The brilliance of a flower in full bloom with infiora™ jewelry glass

Let's look at our infiora™ jewelry glass, a totally new product from NEG. It is characterized by brilliance comparable to that of a diamond, and a degree of fire* that even exceeds a diamond's. We named this product infiora™, from the Italian words for "bloom" (*in fiore*) and "now" (*ora*), because we wanted the wearer to look and feel like a flower in full bloom.

We have been using videos showing a tiara brand that use infiora™ to promote it in the bridal industry, and in October 2022 major bridal dress shops began renting these new tiaras and other accessories. With almost limitless possibilities, infiora™ is perfect for not just bridal tiaras but any number of jewelry applications. We hope that it will give all who wear it the feeling of elation that comes with being a flower in full bloom.



*Fire: Also called gemstone dispersion, fire is the rainbow colors seen coming out of a gem. Through the prism effect, white light enters a gem and exits it divided into the seven colors of the rainbow.

Intellectual Property Policy

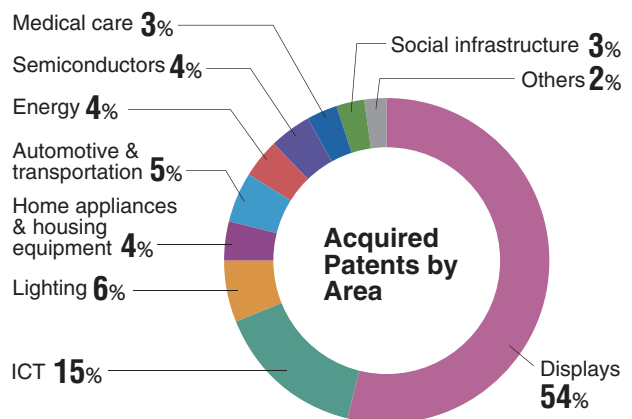
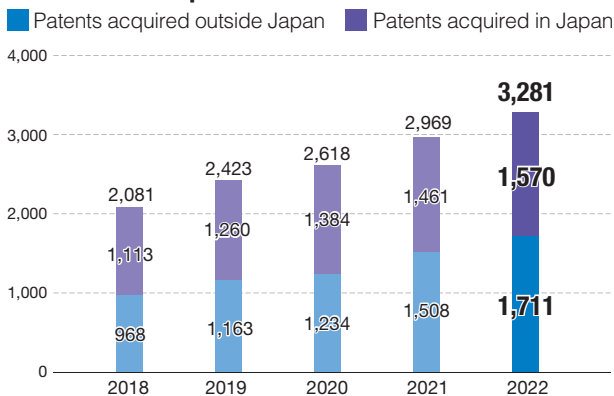
We have established the following basic policy for intellectual property activities, including patent rights, utility model rights, design rights, and trademark rights.

Pursue the appropriate acquisition or protection of intellectual property rights for development results in glass materials, manufacturing methods, and products. Use them to secure business domains and to maintain and strengthen competitiveness in order to differentiate our technology from that of competitors, leveraging this relative superiority for the sake of the company's development.

Our company philosophy is to “Strive to build a brighter future for the world by uncovering the unlimited possibilities of glass for more advanced creative manufacturing.” In order to achieve this, we work daily to develop materials and products—as well as the various processes that underpin the advanced manufacturing involved in producing them—that will provide new functionality and value. These advanced technologies are important assets for our company and must be appropriately protected.

By actively acquiring intellectual property rights, such as patents with strong restraining force, and by appropriately safeguarding and managing our know-how, we keep our competitors from imitating or catching up with us. We also formulate situation-specific intellectual property strategies for each of our businesses, protecting our business domains while pursuing activities that maintain and strengthen our competitiveness.

Number of Acquired Patents



Intellectual Property Management System

The head office's Intellectual Property Division is primarily focused on facilitating the activities listed at right.

- Intellectual property-related investigation, rights acquisition, and utilization
- Analysis of NEG's and others' intellectual property, and provision of information to management and business departments
- Intellectual property-related employee education
- Incentive system for employee inventions

Intellectual Property Education

We run a variety of training programs, including group training for new employees and patent search and application training for young to mid-level employees, in order to foster an intellectual property-oriented mindset focused on protecting

our own intellectual property while respecting the intellectual property of others, thereby facilitating sound development and business activities.

Rewarding Employee Inventions

We provide incentives for employee inventions and other proposals, which stimulate the acquisition of intellectual property rights, including patents, utility models and designs.

Furthermore, we reward employees for these acquired intellectual property rights according to the degree of contribution said rights make to the company.

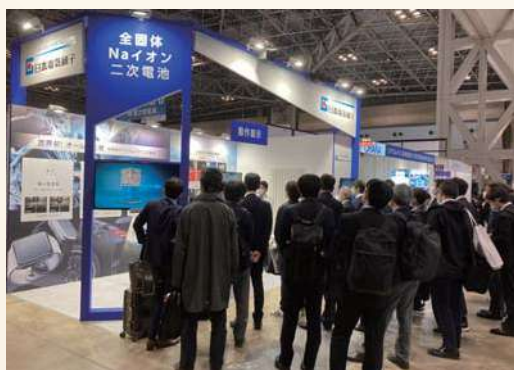
Special Feature

Towards the practical application of an all-solid-state sodium-ion secondary battery

We are leveraging our glass-ceramic technology, at which we excel, to make steady developmental progress towards the practical application of an all-solid-state sodium (Na) ion secondary battery that does not contain lithium or other rare earths and is free from the risk of fire or explosion.

First exhibited at the Battery Japan international trade show

We exhibited our all-oxide, all-solid-state Na-ion secondary battery that uses oxides for all of the main battery components—the positive and negative electrodes and the electrolyte—for the first time at the Battery Japan international trade show. At our booth we exhibited a battery element, which is the smallest unit of the battery, and a battery pack designed for the battery's anticipated actual use. The developers' presentation and demonstration of battery usage for home appliances drew large crowds whose enthusiastic attention indicated a high degree of interest.



Towards practical application: Glass-ceramic electrolyte

One of our latest development achievements is a glass-ceramic electrolyte. Typically, β alumina ceramics are used for the electrolyte of an all-oxide, all-solid-state Na-ion secondary battery. β alumina ceramics are excellent battery materials; however, when used in combination with glass-ceramic that is being used for positive and negative electrodes, the differences in physical properties hinder battery design flexibility and significantly burden the manufacturing process, among other issues. Now, by using glass-ceramic for all of the main battery components—the positive and negative electrodes and the electrolyte—we expect that significant improvements in performance and the manufacturing process can be achieved.

Furthermore, our glass-ceramic electrolyte shows higher ionic conductivity (one of the important properties that determines battery performance) than either a β alumina ceramic or organic electrolyte, and it is stable at temperatures ranging from low to high, thus expanding the potential for all-solid-state Na-ion secondary batteries.

We will continue to pursue the unlimited possibilities of glass in order to produce an all-solid-state Na-ion secondary battery that contributes to the realization of a sustainable, recycling-oriented society.



Display-related Business

We will increase our competitiveness by expanding our innovative manufacturing process to all facilities and pursuing demand in the growing Chinese market.

Director and Senior Vice President
Group General Manager, Display Glass Group
Tomonori Kano



Main Products

Glass for flat-panel displays (FPDs)

The main type is 0.4 to 0.5 mm in thickness and approximately 2,200 by 2,500 mm (8.5 generation) in size. This product is widely used for displays in LCD and OLED TVs, PCs, smartphones, in-vehicle displays, wearable devices, digital signage, and other devices.

G-Leaf™ ultra-thin glass

This glass is as thin as 0.2 mm (200 μm) or less and can be bent like film. By taking advantage of its flexibility and lightness, this product is being put into practical use in electronic devices.

Dinorex™ glass for chemical strengthening

This product is used as cover glass for smartphones, tablets, in-vehicle displays, and other applications. It protects screens from scratches and impact. We also manufacture Dinorex UTG™ ultra-thin glass that can be used for foldable devices.

Business Environment

Stay-at-home demand connected with the COVID-19 pandemic slowed after peaking during the first quarter of fiscal 2022, and, in the display market, nearly all panel manufacturers were forced to adjust production. Glass companies, including NEG, were also affected, seeing a drop in sales as a result of decreased production among panel manufacturers, who are our customers. In

addition, factors such as rising costs caused by raw material and fuel price increases, among other price increases, as well as yen depreciation, pushed down profits. Recovery in demand for displays is forecast to begin in the latter half of 2023. Moderate growth is expected over the medium to longer term due to demand for larger display sizes and display replacement.

Our Strengths

We use the overflow process to manufacture glass for flat-panel displays (FPDs), ultra-thin glass, and glass for chemical strengthening. Since our manufacturing method avoids contact with both sides of the glass substrate, we can produce thin and large flat glass sheets of high surface quality without the need for surface polishing. Currently, we have mass production technology for FPD glass capable of producing panels of all sizes up to the 10.5

generation (approx. 3,000 × 3,300 mm). We built new processing facilities for 10.5-generation glass in China, where demand is greatest, at our production base in Xiamen in 2022 in order to establish a consistent production system handling all processes from melting and forming through to processing.

We also manufacture ultra-thin glass G-Leaf™ with a maximum thickness of 0.2 mm (200 μm), which is flexible enough to be bent

like film, and we are developing applications for flexible devices and other devices. By applying this ultra-thin glass technology, we have developed the Dinorex UTG™ glass for chemical strengthening with a thickness of 0.025 mm (25 μm), which is the thinnest glass in the world and which has been well received by our customers.

In this way, we have earned a high level of trust by always responding with sincerity to customers' requests through our sales

skills and technological development capabilities.

We will also expand the innovative manufacturing process technologies that we have developed to all facilities, which will improve productivity, reduce energy consumption, and reduce CO₂ emissions. This way, we intend to enhance our competitiveness in terms of cost and quality, as well as to contribute to achieving carbon neutrality.

Strategies

- Enhance our competitiveness in quality, cost, and environmental initiatives by expanding our innovative manufacturing process to all facilities
- Expand production and sales in the booming Chinese market, and grow market share
- Pursue commercialization of newly developed products such as ultra-thin glass and glass for chemical strengthening
- Promote the development of new products other than displays by applying our overflow technology to various other glass materials

Business Overview

In fiscal 2022, sales of FPD glass were lower than the previous fiscal year due to the impact of large-scale production adjustment among our customers in response to the sharp downturn in demand for displays, which started in the second quarter. Sales of

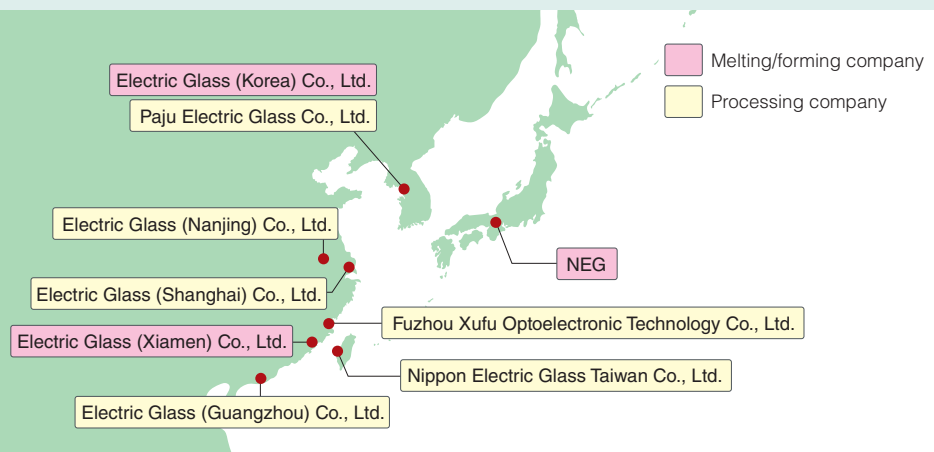
glass for chemical strengthening were also lower than those of the previous fiscal year due to stagnant demand for smartphones and other devices.

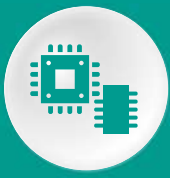
Outlook for Fiscal 2023

During the first half of the year, we expect a decrease in shipments due to the significant impact of production adjustment among our customers. We anticipate this unpredictable situation will continue. We will be making full use of our production base in Xiamen, China, which has a consistent production system handling all processes from melting and forming through to processing, and we will continue to pursue customer acquisition and sales expansion for our 10.5-generation glass, as well as leverage our global supply system to capture demand when the market recovers.

In the area of product development, our customers have been appraising our ultra-thin glass and glass for chemical strengthening. We remain in close communication with our customers to pursue early commercialization. With regard to manufacturing process development, we are expanding our innovative manufacturing process to all facilities with the aim of further improving quality, reducing costs, and reducing CO₂ emissions in the manufacturing process to establish a sustainable business structure.

Display Business Global Network





Optical and Electronic Device-related Business

We aim to expand our business through new product commercialization and stronger marketing.

Senior Vice President
Group General Manager, Electronic Products Group
Masahiro Kobayashi



Main Products

Glass for optical devices

We provide a variety of products used in optical communication networks, data centers, and other locations, such as lens caps, micro prisms, micro lens arrays, and micro capillaries.

Glass for electronic devices

This product is used for home appliances, automobiles, and a variety of industrial equipment including semiconductors. A vast range of applications are available, including cover glass for image sensors; flat glass sheets used in the semiconductor manufacturing process; powder glass used in various electronic components for purposes such as sealing, coating, and insulation; phosphor-glass composite for LED lighting (Lumiphous™); and ultraviolet transmitting glass used in devices for sterilization and other purposes.

Business Environment

● Glass for optical devices

In the first half of fiscal 2022, the installation of base stations and data centers expanded, primarily in Europe and North America, in response to communications demand. However, inflation, rising interest rates, and other factors in the second half of the year increased concerns about an economic downturn and prompted a softening of the market. An increase in demand for high-speed communications, such as 5G, is expected to expand the installation of base stations and data centers on a medium-to-long-term basis. Also, there is a growing need for micro-optical components in optical communications and other areas.

● Glass for electronic devices

The rate of technological innovation for devices in the home appliance, automotive, and semiconductor sectors is fast and the product cycle is therefore shorter than it is for other businesses. In fiscal 2022, the semiconductor-related market remained strong throughout the year, but amid ongoing supply restrictions on materials for the home appliance and automotive markets, the latter half of the year saw a softening of the market due to concerns about an economic downturn.

Our Strengths

We engage in wide-ranging in-house efforts focused on material, product, and process development. These enable us to perform product planning, commercialization, and small-lot, high-mix production of products offering outstanding properties and at a speed that surpasses our competitors. In addition, our production system and quality assurance system can handle glass melting

and forming, processing, incorporating high added value (including coating and compounding), and analysis. As a result, we are highly regarded by our customers for our quality and stable supply.

Our strong relationships of trust with our customers and our high brand equity in the marketplace lead us to a high market share.

Strategies

Pursue product development and sales expansion in growth markets, including 5G, automotive, semiconductors, and healthcare. Strengthen marketing.

- Pursue proactive investment and establish manufacturing and sales systems in promising growth areas
- Strengthen collaboration with our Marketing Division to facilitate market analysis and promotion strategies
- Strengthen internal and external collaboration on product development with a long-term focus

Business Overview

With regard to glass for optical devices, sales for fiscal 2022 remained strong amidst a softening market. With regard to glass for electronic devices, sales for home appliances and smartphones were poor. Sales for automotive image sensor cover glass and semiconductor-related products were strong.

Particularly in the area of semiconductor-related products, we are seeing continued adoption of our glass wafer for supporting semiconductors, which we were the first in the industry to develop and release. Looking ahead, we will offer a variety of products for the semiconductor field, an expected growth area.

Outlook for Fiscal 2023

The home appliance sector is expected to grow steadily on a medium-to-long-term basis. The automotive sector is expected to show growth related to electronic components and semiconductors along with the progress of CASE (Connected, Autonomous, Shared/Service, Electric). Moreover, the healthcare sector is also expected to increase market size thanks to growing social needs.

On the other hand, because of concerns about economic downturn due to the slow pace of recovery in the Chinese economy, global inflation, rising interest rates, and other factors, we

expect that more time will be needed for supply chain inventory liquidation in fiscal 2023. Given this situation, we will work on proactive investment—and establishing manufacturing and sales systems—for various products, including our glass wafers for supporting semiconductors, automotive image sensor cover glass, and low-temperature cofired ceramics (LTCC). We will also work on new product development, manufacturing process automation, and other efforts.

Products for Use in the Semiconductor Sector

Manufacturing process materials



Glass wafer for supporting semiconductors

Glass substrate for use as a jig in cutting-edge semiconductor processes. Offers superb smoothness and flatness to meet rising need.



Glass substrate for probe card

Substrate used in electrical testing apparatuses for semiconductor chips formed on silicon wafers.

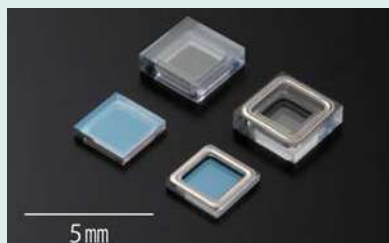
Semiconductor materials

Glass materials for LTCC

Materials with a low dielectric dissipation factor suitable for components and devices in 5G communications.

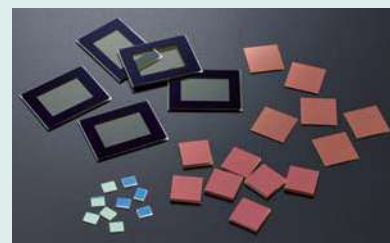


Packaging materials, cover glass



Lid with sealing material for optical device packages

Incorporates highly reliably gold-tin (AuSn) solder, which does not degrade in high-temperature, high-humidity environments or under UV rays. Used for LED, LD, and sensor packages.



Cover glass for automotive image sensors

Has high-precision light-shielding coating and anti-reflection coating applied, contributing to image sensor performance.



Glass Fiber-related Business

We will further advance environmentally friendly technology and globally provide products that contribute to a decarbonized society.



Senior Vice President
Group General Manager, Glass Fiber Group
Hiroaki Nomura

Main Products

Our glass fiber products range in thickness from a few micrometers (μm) to around a dozen μm . They offer high mechanical strength and produce outstanding composite materials.

E glass fiber

Our main product. By combining E glass fibers with resin, fibers enhance the strength, rigidity, heat resistance, and other characteristics of resin molded products. E glass fiber plays an active role in a wide range of fields, including automobile parts, housing equipment, roofing materials and flooring materials. The dimensional stability, electrical insulation, and other properties of E glass fiber help to evolve electrical and electronic components in terms of compactness, thinness, and other advantages.

High modulus glass fiber

High modulus glass fiber has a higher elastic modulus than E glass fiber and is thus suitable for applications requiring high strength and high rigidity, such as wind turbine blades for wind power generation.

ARG fiber

ARG fiber has excellent alkali resistance and can be mixed with cement products. Glass-fiber reinforced concrete (GRC) is reinforced with glass fibers, so it can be used for complicated, fine design structures or other structures in which building exterior wall materials or reinforcing bars cannot be inserted, without having to worry about corrosion as in reinforcing bars. This makes it useful for lightening structures, shortening construction time, and for other purposes. In addition to building construction, GRC is used in civil engineering to repair and reinforce waterways and bridge piers, as well as to prevent tunnel walls from falling off. Other applications include using it with utility poles.

Business Environment

In fiscal 2022, increasing inflation, supply restrictions, and other factors hindered the anticipated growth in demand in our core automobile parts applications, resulting in increased inventory build-up in the supply chain. In the medium to long term, in response to the global trend toward carbon neutrality, we expect a continued shift from gasoline-powered to electric vehicles (EVs). This will drive efforts to lighten parts for greater fuel efficiency and energy savings, to develop parts for EVs, and to pursue other

objectives that will increase demand for glass fiber for automobile parts applications. Also, in the field of energy creation, there are a number of wind power generation projects underway around the world for which long-term growth in demand for glass fiber for wind turbine blades is anticipated.

With regard to housing applications, such as roofing and flooring materials, we predict continued, stable demand in Europe and the U.S.

Our Strengths

With a four-base global production and supply system (Japan, Malaysia, the U.S., Europe), we are able to rapidly develop and

supply our products and services. In addition, from our customers, we have earned praise and gained trust for our technologies

related to the development of binding agents (surface treatment agents) for application to the surfaces of glass fibers in order to form strong bonds between the glass fibers and resin. This has enabled us to continue increasing our market share as well as our competitiveness.

In terms of environmental technology, we have been increasing the percentage of electric heating and reducing the percentage of gas combustion heating used in the melting process in order to

reduce CO₂ emissions. Notably, for over 40 years we have utilized all-electric melting for some of our products, and we are currently expanding its use to other products. Also, our plants in Japan and Malaysia have been reusing all of the waste glass generated in the production process. Companies in our industry have typically disposed of waste glass in landfills, but we have led the industry with our introduction over 20 years ago of a production system committed to recycling.

Strategies

- Increase production capacity at our Malaysian plant and improve the competitiveness of our plants in Europe and the U.S. Use these to expand our global supply system
- Expand market share in growth areas (automobiles, electrical and electronic components, housing equipment, infrastructure)
- Improve our environmental technology and competitiveness (improve energy efficiency and pursue development of glass melting technology, etc.)
- Develop and expand sales of high-value-added products (flat glass fiber, high modulus glass fiber, binding agents, etc.)

Business Overview

In fiscal 2022, amid rising raw material and fuel costs and logistics costs, sales remained strong from the start of the year until the middle of the year. From the third quarter, demand began to slow, especially for high-performance resin applications for automobile

parts, forcing us to adjust production towards the end of the fiscal year. However, overall business performance was buoyed by yen depreciation, as well as revised product prices and surcharges associated with raw materials, fuel, and distribution costs.

Outlook for Fiscal 2023





Demand for glass fiber, particularly for automobile parts, is expected to recover gradually.

Since the latter half of fiscal 2022, our new facilities at the Malaysian plant, which incorporate the latest glass melting technology, have been operating and thus allowing us to pursue greater production efficiency. Meanwhile, we are proceeding with repairs at existing facilities, which were put off in order to allow us to keep up with demand. This will help us prepare to rapidly capture demand once the market recovers.

Also, in anticipation of future growth, we are working on expanding sales of our new flat glass fiber products and on developing new high-modulus glass fiber products. In our manufacturing process, as part of our efforts to achieve carbon neutrality, we are increasing the percentage of electrical power used for our glass melting furnaces, as well as introducing all-electric melting. By shifting to high-efficiency production, low energy consumption, and low CO₂ emissions, we are working to improve our medium- to long-term competitiveness.

Flat Glass Fiber (Glass Fiber with an Elliptical Cross Section)

As electronic devices get smaller, their housings and structural components get thinner, thus increasing the demand for greater strength with less warpage. Flat glass fiber is manufactured using a special method that greatly suppresses warpage while maintaining the high level of strength of resin products. We expect increased sales moving forward.

	Cross section	Warpage test
Conventional product (round cross section)		
Flat glass fiber (elliptical cross section)		



Medical Care, Heat Resistance, and Building Material-related Business

We will expand our business to support the medical and pharmaceutical markets and their anticipated global growth.

Senior Vice President
Group General Manager, Consumer Glass Products Group
Norio Nakamura



Main Products

Glass for medical care

Borosilicate glass tubing has excellent acid and chemical resistance and high strength, and there is growing demand for it as a material used in ampules, vials, and other medical containers. LX Premium, with its exceptional radiation-shielding properties, is used in medical facilities to protect medical personnel from radiation exposure.

Heat-resistant glass (heat-resistant glass-ceramics)

Thanks to its exceptional thermal shock resistance and mechanical strength, this glass is used in heater and fireplace windows, the top plates of cooking appliances, and other housing equipment.

Glass for building materials

Our glass for building materials comes in a variety of shapes and outstanding properties. They include fire-rated glass, which prevents the spread of fire, glass-ceramic building materials, which enliven spaces, and glass blocks.

Business Environment

● Glass for medical care

Our glass tubing for pharmaceutical and medical use saw a sharp increase in demand in 2021, primarily for COVID-19 vaccine containers. As we entered 2022, this demand began to gradually slow down until softening in the fourth quarter. Nevertheless, as medical care continues to grow ever more sophisticated, we are expecting growth in our high-grade glass tubing for pharmaceutical and medical use business worldwide, including in the Chinese and Indian markets. Moreover, the market for radiation-shielding glass is expected to continue to enjoy stable demand.

● Heat-resistant glass (heat-resistant glass-ceramics)

With fuel prices soaring due to the Russian invasion of Ukraine, demand for glass for wood-burning stoves grew, primarily in

Europe. This demand peaked and began declining in the fourth quarter. In our cooking appliance glass business, our transparent glass-ceramic top plates, which is one of our core products, has been steadily penetrating the European market. With raw material and fuel costs rising, we need to promote the superior characteristics of our products.

● Glass for building materials

For fire-rated glass (heat-resistant glass-ceramics), we have seen increasing adoption in line with our sales promotion activities despite continuing rises in raw material and fuel costs. Given this, and because the properties of our products are superior to those of competitor products (wire-reinforced glass and thermally tempered glass), we are getting a growing number of inquiries from building projects that prioritize quality and safety.

Our Strengths

We remain committed to developing technologies related to glass composition, melting, and forming in order to develop a high-quality product line beyond the capabilities of our competitors.

Our glass tubing for pharmaceutical and medical use exhibits world-class quality in terms of properties such as chemical durability, glass homogeneity, and forming accuracy. Our products

have earned the trust of the pharmaceutical industry across Japan and around the world. Meanwhile, our radiation-shielding glass offers excellent shielding, is available in larger sizes, and contributes to sophisticated medical care and improved safety. In addition, we have numerous glass-ceramic products with extremely

unique properties. These include glass that is particularly resistant to thermal shock and has a thermal expansion coefficient of almost zero. This glass is being used for cooking appliance top plates, stove windows, and fire protection applications.

Strategies

- **Manufacturing process** Improve production efficiency and reduce environmental impact through automation and the introduction of all-electric glass melting technology
- **Glass tubing for pharmaceutical and medical use** Improve dimensional control technology, as well as respond to demand and reduce costs by utilizing the state-of-the-art facilities in Malaysia
- **Heat-resistant glass (heat-resistant glass-ceramics)** Improve quality and cost-competitiveness, develop new products, and develop applications that take advantage of the properties of our world's first colorless and transparent zero-expansion glass-ceramics Cerapure™
- **Glass for building materials** Strengthen promotion and expand sales of our FireLite™ fire-rated glass for fire protection applications by highlighting its safety, design, and other features

Business Overview

Sales for medical care, heat resistance, and building material-related business in fiscal 2022 were higher than the previous fiscal year, being buoyed by factors such as revised product prices and the impact of foreign exchange rates. In glass tubing for pharmaceutical and medical use, despite a slowdown in demand in the fourth quarter, primarily centered on COVID-19 vaccine containers, factors such as revised pricing and yen depreciation contributed to higher sales than the previous fiscal

year. Radiation-shielding glass business remained strong. Heat-resistant glass experienced a softening of demand in the fourth quarter. Nevertheless, factors such as yen depreciation and increased demand for wood-burning stoves due to soaring fuel costs in Europe contributed to higher sales than the previous fiscal year. Glass for building materials suffered from generally sluggish shipments, which led to lower sales than the previous fiscal year.

Outlook for Fiscal 2023

With the rate of inflation accelerating, the business environment is becoming increasingly difficult. We are pursuing automation in our production, inspection, and packaging processes, as well as working to develop all-electric glass melting technology that will contribute to greater efficiency, quality, and reduced CO₂ emissions. In this way, we will improve our competitiveness as we make progress toward achieving our CO₂ emissions reduction targets.

With regard to glass tubing for pharmaceutical and medical use, a recovery in demand is expected in the latter half of 2023. We will take full advantage of our enhanced, state-of-the-art production facilities in Malaysia to adapt our shipments to meet this recovery in

demand.

For heat-resistant glass, we foresee solid sales aimed at European stoves, cooking appliance top plates, and other applications. We are focused on increasing cost-competitiveness and on developing new products.

With regard to glass for building materials, thanks to its high fireproof performance, fire-rated glass is increasingly adopted in public facilities such as schools, hospitals, and transportation facilities, which prioritize safety. Moving forward, we will continue to work on differentiating our products from those of our competitors in order to expand our sales.

What Is FireLite™ Fire-rated Glass?

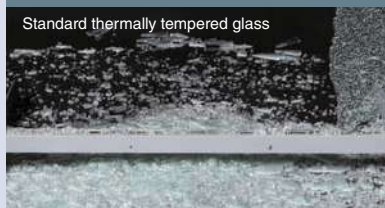
This is a heat-resistant glass-ceramic with a thermal expansion coefficient of almost zero. It also meets the UL standards in the U.S. It has outstanding properties that ensure safety during firefighting activities and evacuations. That is why, when combined with the fact that it has little risk of unintended breakage, it is being adopted as fire prevention apparatus at various facilities both in Japan and overseas.

Resistant to thermal shock



FireLite™ is the only fire-resistant glass that will not break even after being heated to 800°C and doused with ice water, thanks to a thermal expansion coefficient of almost zero.

No risk of unintended breakage



With standard thermally tempered glass, there is a risk of unintended breakage, even without an external force being applied. There's no such concern with FireLite™.

No wires means a clear field of vision



Because there are no wires, it provides the same clear and expansive field of vision as normal window glass. It allows fire retarding partitions that provide a secure evacuation route with good visibility.

CSR Foundation

We will contribute to realizing a sustainable society by working on three priority themes: the Environment, Diversity and Inclusion, and Community Contribution.

The History and Themes of Our CSR Activities

Our work on pollution problems at our Fujisawa Plant (closed in 2015) in the early 1970s taught us to undertake environmental conservation as an issue crucial to the sustainability of our operations. A particular characteristic of glass manufacturers is the consumption of large amounts of energy and resources, and the emission of carbon dioxide. Accordingly, environmental conservation continues to be an issue of the utmost importance for our Group. At the same time, we have engaged in

contribution to the community mainly by assisting with the education of local human resources and through active involvement in employment of the disabled.

Based on this historical background, and in order to further advance our CSR activities, the Management Committee in which our top management participates has established a “way of thinking” that forms the foundation of these activities, which we have set forth in our CSR priority themes.

Our Fundamental Way of Thinking Regarding CSR

CSR is a key area in our corporate activities and cannot exist separate from our Corporate Philosophy Structure. Accordingly, we carry out our CSR activities in accordance with the intention of our Corporate Philosophy Structure and, through the implementation of CSR activities, we aim to raise our corporate value and realize a sustainable society. We have established both of these approaches as our fundamental way of thinking in regard to CSR.

Our Way of Thinking on CSR

We promote CSR with our Corporate Philosophy Structure as the basic principles.

Through our CSR activities we will raise our corporate value and realize a sustainable society.

Three Priority Themes

We have established the Environment, Diversity and Inclusion, and Community Contribution as the three priority themes (those with materiality) of our CSR. These themes have a strong association with the priority issues that we have focused on so far (environmental conservation, community contribution, employment of the disabled). We have reconfirmed the

background and importance of these three themes and have clarified the future direction for scaling up our initiatives on a broader scale. In addition, we will place emphasis on these themes, as we believe they are directly linked to the United Nations’ Sustainable Development Goals (SDGs).

Materiality Determination Process



Three Priority Themes Defined

Environment

Because environmental conservation is a duty for our operations, we advocate “consideration for the environment” and “efficient manufacturing processes lead to environment-friendly manufacturing.” Furthermore, we maintain the attitude that it is unthinkable for our operational activities not to include environmental conservation activities.

Diversity and Inclusion

The basis of our thinking on Diversity and Inclusion is that the integrated strength of personnel with diverse backgrounds and values—whether in terms of gender, age, nationality, or other—is the driving force behind corporate growth. Of course, employment of the disabled is also included in this theme. At the same time, we will do our utmost for all these employees by providing personnel training and maintaining a safe and healthy working environment for them.

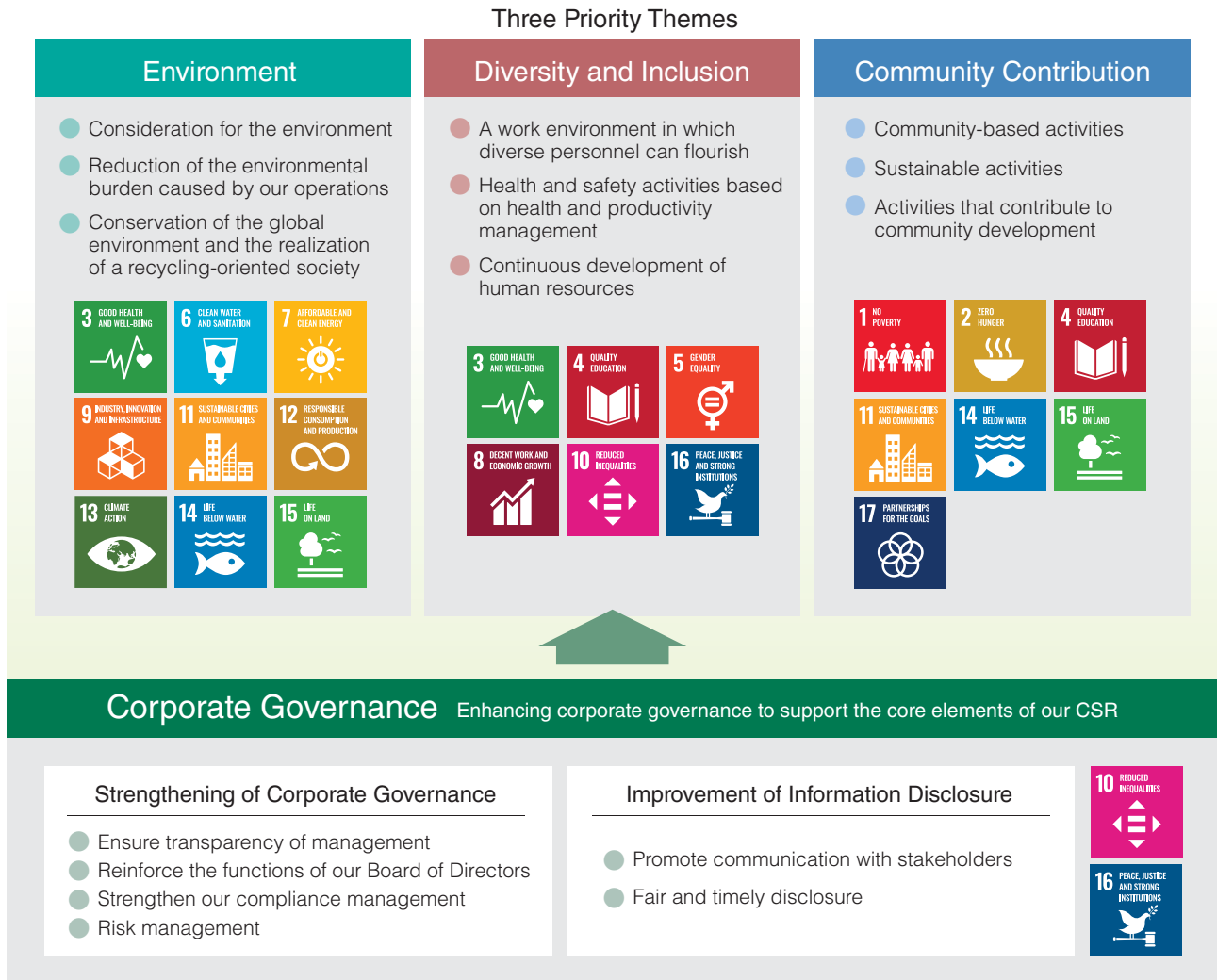
Community Contribution

A good relationship with the community is essential for sustainable business. Therefore, we believe it is important to engage with local communities to gain their trust and appreciation. We will continue to actively participate in local activities, and also provide support for the disadvantaged and for human resource development in the communities we serve.

The Basic Policy of Our Priority Themes

In order to further clarify the direction of our CSR activities, we have determined a basic policy for each of our priority themes. Furthermore, we have identified corporate governance as the

foundation of the core elements of our CSR and are positioning and developing it within the framework of our CSR.



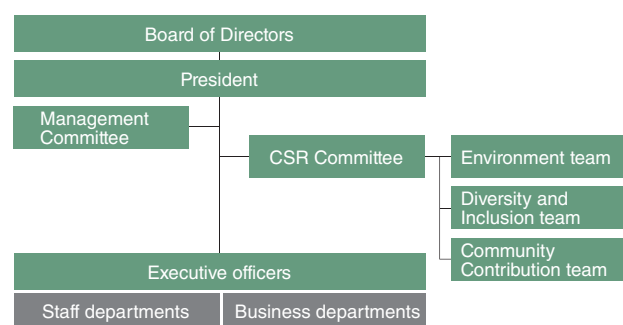
CSR Committee

Companies today strive for sustainable growth through corporate activities that solve an increasing number of problems related to things like climate change, human capital, and human rights. They also face growing pressure from society at large to contribute to solving social problems and disclose information in their business. That is why in January 2023, we formed the CSR Committee, a cross-organizational body to comprehensively deliberate on CSR direction and activities and advise company management on these, mobilize CSR activities, and ensure that information is disclosed appropriately.

Centered on our three priority themes of Environment, Diversity and Inclusion, and Community Contribution, the CSR Committee takes on a wide range of sustainability issues such as ESG and the SDGs in order to raise our corporate value and

contribute to the sustainable development of society.

To ensure greater practicality in pursuing the three priority themes, the CSR Committee comprises a working team for each one.



Environment

With “consideration for the environment” as one of our key values, we will continue to manufacture products in an environmentally friendly way.

Our Way of Thinking on Environmental Conservation

Environmental conservation is one of the top management priorities of a glass manufacturer that uses a large amount of resources and energy. We hold consideration for the environment as an important value and have always been conscious of environmental conservation through our operations. We firmly believe that having the world’s most efficient processes possible is the key to achieving the world’s most environment-friendly manufacturing. In this regard, we are constantly striving to reduce our environmental footprint while taking on various challenges, including sustainable

development and biodiversity conservation. We are also putting in place measures to achieve carbon neutrality, a key concern in light of ongoing global climate change.

The Environmental Charter is our fundamental policy on the environment and sets forth the direction we need to follow in enacting our initiatives for environmental conservation. In accordance with our Environmental Charter, through our glass business, and together with our group companies, we will continue to be instrumental in preserving the global environment and realizing a recycling-oriented society.

Environmental Charter

Environmental Principles

Preservation of the global environment is extremely important and indispensable for the prosperity of civilization and humanity in the 21st century. Nippon Electric Glass, upholding its corporate philosophy of “To build a brighter future for the world by uncovering the unlimited possibilities of glass for more advanced creative manufacturing” and adhering to “Consideration for the environment” as one of its essential corporate values, strives to be and remain the world’s leading manufacturer of special glass by ensuring state-of-the-art technological development, the highest-quality standards, efficient production, and steady product supply. Nippon Electric Glass and its group companies are committed to contributing to the preservation of the global environment and the realization of a recycling-based society by adopting highly efficient and environmentally responsible processes.

Action Plan

1. We will honor and observe all environment-related laws and regulations and the environment-related agreements and conventions that we have signed, and establish and enforce our own and voluntary environmental restrictions.
2. We will endeavor to reduce our environmental impact in all aspects of our corporate activities and in all stages of the product life cycle, including procurement, manufacturing, transportation, sales, use, reuse, treatment, and disposal.
3. We will attain the world’s highest-level manufacturing to more effectively utilize natural resources and energy sources, thereby contributing to the preservation of biodiversity and the reduction of greenhouse gas emissions.
4. We will strive to adapt our activities to the requirements of 21st-century society to prevent pollution, thereby optimizing our presence in society.
5. We will set environmental objectives and targets and attain them through optimization of our essential operations and environmental protection activities in which all employees participate. We will also continuously improve our environmental management system to enhance our environmental protection performance.

This charter is informed to all employees and affiliated companies, and is made available to parties outside the company at their request.

Environmental Management System

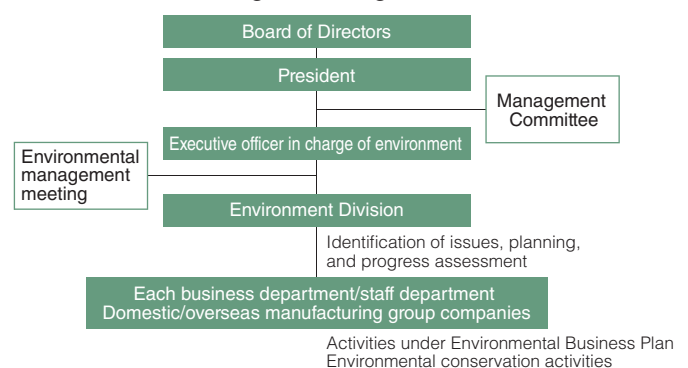
Our environmental management system is composed of an Environment Division, business departments (including manufacturing group companies inside and outside Japan), and staff departments—all working under the president and executive officer in charge of the environment.

climate change and many other environmental issues, along with the rollout of environmental conservation initiatives.

Environmental Management Meeting

This meeting is held every three months. The executive officer in charge of the environment chairs the meeting, which is attended by the president, senior vice presidents, general managers of our business departments, and representatives of our major group companies that carry out manufacturing. The meeting serves as a forum for deliberations related to groupwide environmental activities, covering our responses to

Environmental Management Organization



Environmental Business Plan

Our Environmental Business Plan is our own unique initiative that applies business management principles to environmental conservation. In 2021, we launched initiatives related to energy that supplement our existing focus on waste and water since

2000. Under our energy business plan, we utilize energy consumption rate in glass manufacturing as an indicator as we pursue reductions and, through these efforts, work to lessen our environmental impact and address the issue of global warming.

Global Warming Countermeasures

Reducing melting furnace greenhouse gas emissions is a key challenge for glass manufacturing, and one which we have made our top priority. In 1993, we installed Japan's first oxy-fuel firing glass melting furnace to help reduce energy loss caused by exhaust gases. This technology has now been adopted for almost all of our furnaces. We have also been steadily switching over to fossil fuels with lower CO₂ emissions. In 2010, we stopped using heavy oil completely, and, as of 2020, we have switched to using natural gas to meet over 99% of our fossil fuel needs.

We employ an electric melting technology that inserts

electrodes directly into the glass melting furnace and heats the glass by energizing it directly. This technology reduces CO₂ emissions from fuel, as well as greatly reduces heat discharge from melting furnaces, thereby significantly improving energy efficiency. Furthermore, we are actively moving away from furnaces that use electrical energy together with gas combustion to all-electric melting furnaces, which use only electrical energy to melt glass. Moving forward, we will undertake a phased transition to renewable energy to supply our power needs and, thereby, enable us to achieve our CO₂ emissions reduction targets.

Initiative to Protect the Global Environment

As part of our initiative to protect the global environment and contribute to sustainable systems, we take measures to

conserve biodiversity while supplying and developing eco-friendly products that save energy and generate energy.

Green Loan-related Reporting

On November 22, 2022, we took out a green loan in order to secure funding. As of December 31, 2022, these funds have

been allocated as shown to the following projects, which satisfy the eligibility criteria for use of green loan funding.

(1) Allocation reporting

Eligibility criteria	Amount procured (billion yen)	Amount allocated (billion yen)	Amount unallocated (billion yen)
Transition to all-electric melting furnaces and installation of solar power generation equipment	10	1.9	8.1

Note: 1. Of the amount allocated, 1.4 billion yen has been allocated to refinancing.

2. All of the amount unallocated is scheduled to be allocated by December 2024 to projects that satisfy the eligibility criteria.

(2) Impact reporting

Because the projects have not begun operation, there have not yet been any environmental improvement effects.

Environmental News

Installation of a Mega Solar Power System at the Shiga-Takatsuki Plant

We installed a mega solar power system at the Shiga-Takatsuki Plant (Nagahama City, Shiga Prefecture), and it went into full operation in April 2023. This system is equipped with approximately 5,000 solar panels and is expected to generate around 3,700 MWh of electricity, which is roughly equivalent to the annual power consumption of 860 households.

We have developed a CO₂ reduction action plan and are making a variety of efforts to achieve carbon neutrality by 2050. The installation of this mega solar power system is one such effort. By utilizing renewable energy to meet a portion of the plant's power needs, we are reducing our environmental footprint as well as helping to curb global warming.



Disclosures in Accordance with TCFD Recommendations

Consideration for the environment is one of our key values, and, with the belief that the world's most efficient manufacturing leads to the world's most environmentally friendly manufacturing, we have been working to save energy and reduce CO₂ emissions through improvements in our quality and yield. In November 2021, we declared our support for the Task Force on Climate-related Financial Disclosures (TCFD) to analyze risks and opportunities that climate change brings to our business, as well as to inform our stakeholders of financial impacts and our countermeasures.

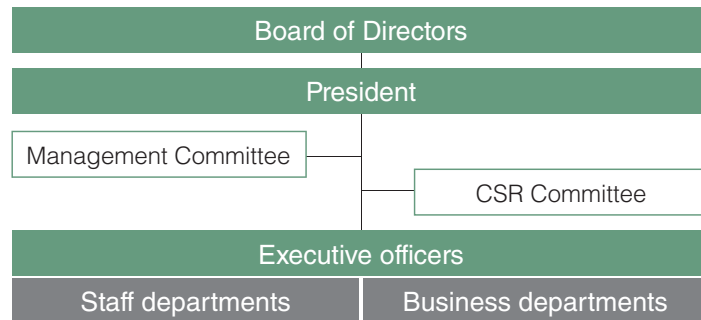
We will continue our analyses and work to improve information disclosure while steadily carrying out our carbon neutrality action plan.

For more information about our carbon neutrality action plan, refer to "III. Metrics and Targets; 2. Initiatives to Achieve Targets."



I. Governance and Risk Management

The figure below shows our governance structure for CSR, including for climate-related risks and opportunities.



The Board of Directors makes decisions on important management affairs of the NEG Group and supervises the execution of business affairs. The president is responsible for the auditing of business affairs execution. The Management Committee deliberates on our company's important managerial affairs and draws up detailed action plans regarding the decisions made at the Board of Directors meetings.

The CSR Committee has been established to engage in comprehensive discussion about the direction and content of CSR activities, including climate-related measures, and to have flexibility in developing such activities. In addition, the committee addresses broad sustainability-related challenges, such as ESG and the SDGs, centered on our three priority themes for CSR (the environment, diversity and inclusion, and community contribution). The committee is chaired by an executive officer in charge of general affairs, is comprised of CSR-related department heads and other managers, and has a secretariat based in the General Affairs Division.

The main activities of the CSR Committee are to develop CSR-related basic policies; establish priority themes; discuss, draft and promote measures to address priority themes; to

discuss and design information disclosure policies and disclosure content; and to provide recommendations and reports to the Management Committee and Board of Directors as appropriate.

With regard to climate-related matters, the CSR Committee conducts hearings with staff departments and business departments to identify and review risks and opportunities. In addition to evaluating and reviewing business impact, the committee works with relevant departments to regularly check the progress of the carbon neutrality action plan, which is the key to our strategic resilience.

Executive officers and relevant staff departments and business departments work via the carbon neutrality action plan and other efforts to mitigate climate-related risks and capitalize on climate-related opportunities.

The climate-related risks and opportunities, as well as countermeasures, identified and evaluated by the CSR Committee are reflected in the periodic risk auditing conducted by the NEG Group in line with our basic policy on internal control.

II. Strategies

1. Scenario Analysis

We have carried out the following scenario analysis in order to evaluate the business impacts under different scenarios, as well as to evaluate our strategic resilience with regard to climate-related risks and opportunities.

a) Analysis steps

Step 1	Step 2	Step 3	Step 4
Identify important climate-related risks and opportunities; establish parameters	Establish climate-related scenarios	Evaluate business impact under the different scenarios	Evaluate strategic resilience with regard to climate-related risks and opportunities; investigate further countermeasures

b) Businesses targeted for analysis

All NEG Group businesses are targeted for analysis.

c) Established scenarios

Category	Scenario overview
	Main reference scenarios
1.5°C/2°C scenario	This scenario involves the enactment of policies and regulations aimed at achieving a decarbonized society and which seek to keep global warming to within 1.5°C/2°C above the pre-industrial revolution global temperature. Compared with the 4°C scenario, the transition risks are high, but the physical risks can be kept low. Demand for products that contribute to the achievement of a decarbonized society will become high.
	<ul style="list-style-type: none"> • IEA Net-Zero Emissions by 2050 Scenario • IEA World Energy Outlook 2020, 2021 Sustainable Development Scenario • IPCC RCP2.6
4°C scenario	This scenario involves a future where the policies and regulations, which various countries have announced are fulfilled, but no new policies or regulations are introduced. Energy-derived CO ₂ emissions continue to increase worldwide. Compared with the 1.5°C/2°C scenario, the transition risks are low, but the physical risks will grow larger.
	<ul style="list-style-type: none"> • IEA World Energy Outlook 2021 Stated Policy Scenario • IPCC RCP8.5

d) Evaluation timeline

The impact on the NEG Group's business by major climate-related risks and opportunities identified from scenario analysis was evaluated on a timeline focused on the year 2030.

2. Major Climate-related Risks and Opportunities Identified, Evaluation of Impact on Business, and Countermeasures

Type	Risks and opportunities	Impact on business	Countermeasures
Transition risks			
Policy and legal	Carbon pricing introduction and increase	Increase in manufacturing costs 1.5°C/2°C: 17 billion yen 4°C: 2 billion yen	Enactment of the carbon neutrality action plan
Technology	Investment in manufacturing facilities to reduce CO ₂ emissions	Increase in depreciation costs Impact on business: Medium	
Reputation	Negative criticism of energy-intensive companies	Decreased sales*	
Market	Increase in energy prices	Increase in logistics costs Impact on business: Medium	Maintain good relationships with suppliers, pursue supplier development and diversification, switch to generic items
	Soaring glass raw material prices due to changes in the supply and demand structure for resources	Increase in procurement costs*	
Physical risks			
Acute	Negative impact on operations and logistics due to increased frequency of disasters, extreme weather, typhoons, and flooding	Decreased sales* Increase in facility repair costs*	Implement business continuity planning, carry out disaster prevention activities, disperse operations among different manufacturing bases
Chronic	Negative impact on operations due to drought		
Opportunities			
Resource efficiency	Reduced energy consumption and Scope 1 + Scope 2 CO ₂ emissions as a result of highly efficient production (implementation of carbon neutrality action plan)	Reduction in manufacturing costs Impact on business: High	Enactment of the carbon neutrality action plan
Products	Increased demand for glass fiber for wind turbines due to increased construction of wind power generation facilities	Increased sales Impact on business: 1.5/2°C: high; 4°C: Medium	Promote R&D; pursue active sales to respond to new needs
	Increased demand for low-carbon products (thin sheet glass for FPDs), which contribute to reduced production and shipping costs in customer processes		
	Increased demand for glass fiber for strengthening functional plastics, which will be used to lighten automotive bodies and in battery casings as EVs become more widespread	Increased sales*	
Market	Increased demand for all-solid-state Na-ion batteries as they go to market and society transitions to becoming decarbonized		

Estimation of impact on business

Low: < 10 billion yen; Medium: ≥10 billion yen but < 30 billion yen; High: ≥ 30 billion yen

*Due to a lack of data for calculating impact on business, qualitative descriptions are utilized.

3. Strategic Resilience

The NEG Group is pursuing new technologies and solutions, both in-house and external, while steadily implementing such countermeasures as the carbon neutrality action plan, in order to increase the resilience of business activities.

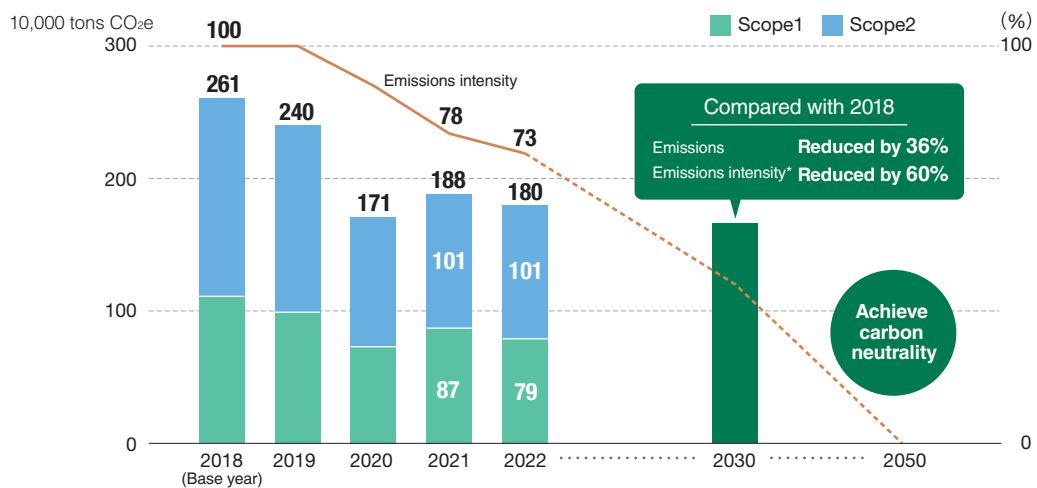
III. Metrics and Targets

Against a backdrop of the current, pressing and global need for climate change action, we continue to pursue sustainable manufacturing practices, as well as strive to precisely address climate change through the establishment, in February 2022, of CO₂ emissions reduction targets (Scope 1 + Scope 2) accompanied by a commitment to carbon neutrality by 2050. To achieve this, we are undertaking ambitious measures, including introducing all-electric melting furnaces across our product lines, switching over to energy-efficient facilities, and investing in renewable energy. With regard to Scope 3, as well, we are working to improve our information disclosure, such as by creating a system for calculating emissions volume.

1. CO₂ Emissions Reduction Targets

By 2030	CO₂ emissions (Scope 1 + Scope 2) Reduced by 36%	Achieve carbon neutrality by 2050
	Emissions intensity* (Scope 1 + Scope 2) Reduced by 60%	

(Compared with 2018)
*Production weight ratio



2. Initiatives to Achieve Targets

In order to achieve CO₂ emissions reduction targets, the NEG Group has created a carbon neutrality action plan, which involves a variety of initiatives, focusing primarily on those in the table at right. Through these, we will achieve our targets by 2030, after which we will pursue improvement activities that will make us carbon neutral by 2050.

Category	Initiatives
Manufacturing process	Promoting all-electric melting and improving melting efficiency
	Switching to energy-saving facilities
	Technological improvement and electrification for forming and processing facilities
	Operations automation and optimization
Utility facilities	Upgrading to high-efficiency facilities
	Facility optimization
	Operation optimization
Technological development	Combustion technology development for CO ₂ -free fuel (hydrogen, etc.)
Procurement	Investment and procurement for renewable energy

Diversity and Inclusion

As a driver of long-term value creation, we work to ensure the diversity of our workforce and to create an environment where they can flourish.

Our Way of Thinking on Human Resources

The glass business requires a lot of time and significant investment to develop materials and processes; hence, if you want to develop innovative products and achieve sustainable growth, you cannot simply chase short-term profit. We prioritize our human resources as drivers of long-term value creation and strive to create an environment where highly engaged employees with diverse values and a long-term perspective undertake challenging work.

In 2020, we set forth an ideal for our personnel that they would be persons capable of performing at a world-class level in all areas. In order to help them achieve this, we have established a variety of growth and development programs, including level-specific training, career education, and self-development programs. Also, in order to create a more employee-friendly environment, we are working to accommodate greater flexibility in work styles and to pursue measures for occupational health and safety and health and productivity management. In terms of human resource management, we are working in a variety of areas to improve employee motivation, such as by revising our skills and performance-based remuneration system and improving how we treat rehired employees.

Essential Qualifications and Character



Hiring a Diverse Workforce

As we believe that employees are the foundation of a company's growth, we hire a diverse range of human resources regardless of their gender, age, nationality, or other characteristics.

As well, in addition to expanding the number of recent graduates hired, we also incorporate new recruiting methods and approaches. For example, we hire highly qualified, mid-career professionals and leverage our connections with researchers to recruit personnel. We also make use of referral recruitment when hiring employees locally. Even amidst accelerating job mobility, we are creating a wide range of entry

points, such as for previous NEG employees to be rehired, to help us in securing a diverse workforce.

We are also a proactive employer of people with disabilities. In 1980, we established a special-purpose subsidiary aimed at employing people with disabilities. We were among the first six companies in Japan to do so. Since then, we have sought to increase our employment rate for people with disabilities to 4.6%, which is double the statutory requirement, and have hired people with disabilities as full-time employees. Moving forward, we will continue to employ people with disabilities.

Human Resource Development

In order to attain our goal of becoming the world's leading manufacturer of special glass, we need to have personnel capable of performing at a world-class level in all areas. We help our employees to better themselves by offering them a range of study opportunities, such as on-the-job training,

level-specific training, global human resource training, skills training, and self-development programs that include acquiring industry certification. We will continue to provide our employees with further training, which will help them get to that next level.

Efforts to Retain and Empower Employees

Work-style Reforms

We started promoting work-style reforms in 2017. Since then, we have implemented a wide range of initiatives, including expanding work-style diversity to encompass telecommuting, flextime and the like, implementing five-day holidays and no-overtime days, supporting employees in balancing work with childcare and nursing care, and hosting work-style reform seminars. These efforts have enabled us to reduce overtime work and increase the taking of paid leave. Our employees reap the benefits of these efforts in the form of lump-sum payments, an expanded welfare program, IT investment, and in other ways. We will continue to pursue improvements as we review and revise our efforts.

Support for Raising the Next Generation and Women's Empowerment

In February 2019, we received Platinum Kurumin accreditation under the Act on Advancement of Measures to Support Raising Next-Generation Children in Japan and have continued providing such support.

Under our Women's Empowerment Project, we hold events for female employees to exchange information and opinions with staff at other firms. We are also working to nurture female leaders for positions in management.

Active Participation of Senior Workers

As Japanese society ages and fewer children are being born, it is becoming imperative to utilize our senior workforce. We have raised wage levels for senior employees incrementally and put in place a system for rewarding them, which reflects the extent of their work and how well they carry out their duties. We wish to further utilize motivated and capable seniors and promote a smooth handoff to the younger generation.

Empowering Employees with Roots in Other Countries

Year by year, as the number of our non-Japanese employees increases, we are providing support by following up to ensure an understanding of the company's policies, offering Japanese language classes and a mentoring system, and through other appropriate means to support smooth workplace communications. Going forward, we will be putting energy into ensuring that workplace environments allow employees of many different backgrounds to participate in the workplace with vitality, building synergy through the mutual respect of each other's culture. In this spirit, in January 2023 we appointed our first ever non-Japanese executive officer.

Health and Productivity Management

We believe that improving the health of all employees leads to corporate growth. We have therefore been developing health and safety activities based on health and productivity management.

Health and Productivity Activities

We have established key performance indicators (KPIs) for mental and physical health, and are rolling out activities, education, and other initiatives aimed at improving the health of employees in each area.

Health and Safety

Regarding health and safety, our Principles of Activities state that "We put safety first in everything we do, and we abide by all rules and regulations regarding health and safety." Under our companywide health and safety program, our health and productivity management philosophy forms the basis for an action policy aimed at maintaining and improving the mental and physical health of each employee. This allows us to create a vibrant working environment that increases the creativity and productivity of the entire corporation.

Diversity News

Employee Awareness Survey

We conducted an employee awareness survey to help us build an organization in which employees feel productively challenged in their work. The results of this survey are shared with management and all employees; the organizational strengths and weaknesses of the entire company, as well as each workplace, are analyzed; and improvement activities are developed and implemented in response to the issues identified. We will continue to conduct this survey on a regular basis as we work to create a vital and vibrant organization.

Purpose	To increase organizational transparency and facilitate the development of companywide and workplace-specific improvement activities
Respondents	1,915 people
Response rate	97.8%



Creating a One NEG team across the corporation

Executive Officer
Vice President in charge of Glass Fiber Business (Sales)
Nippon Electric Glass, Co., Ltd.

Eric Barrouillet

Being nominated Executive Officer of the company and Vice President of Global Sales for Glass Fiber on January 1, 2023 was a privilege and I take a lot of pride in this nomination. I am the first non-Japanese employee of the company to become an executive officer and this alone is a great signal for our entire organization, a tribute to its values of openness and inclusion.

I joined PPG Industries where most of my career was spent in different glass sectors (flat glass, mirror production, automotive glass, and then glass fiber) and in different capacities (maintenance, production, R&D, marketing, sales, and general management). Throughout the years, I have worked and lived in several countries (Italy, the U.S., Switzerland, and the Netherlands). My office is in Electric Glass Fiber NL, B.V. based in Hoogezand, the Netherlands.

When joining NEG Glass Fiber in 2016 for European operations and in 2017 for the U.S. operations, former PPG employees were delighted to join a company where glass really mattered: we were joining colleagues with the same industrial culture and the same operational focus.

Of course, the integration was not exempt from ups and downs, mainly due to different cultural backgrounds. But overall, the turnover rate of former PPG employees remained quite low, illustrating the enthusiasm of being part of a real glass company and the attractiveness of the company culture and the projects offered by the company.

I insist on the One NEG team concept: every customer wherever they are located should feel they are dealing with only one organization regardless of the product's origin or the team in charge of it. This aspect will give us a competitive advantage, making our customers comfortable with a global supplier whose main strength is a harmonized organization with the same practices, the same behavior, and the same products everywhere.

We should now dedicate our energy and efforts to creating a One NEG team across the entire corporation, despite our differences, regardless of origin, gender, sexual orientation, or language. We need to assume that everything is possible and every barrier can be overcome with willingness and persistence: we need to trust ourselves and each other within teams so that the hurdles we encounter will become stepping stones towards our shared future.

In addition, the One NEG team will provide every employee with the opportunity to take part in a bigger adventure—with each one of you contributing to the upcoming successes, which will pave the way to our future growth.

We have many challenges ahead of us: sustainability, regional footprint, geopolitical changes, competition from Chinese players, supply chain security and stability... We will be successful altogether by working as a unified team, with the same values, the same goals, and a shared enthusiasm.

Community Contribution

Harmony with the local community is essential to sustainable business activities. Activities including educational support and participation in community events are fundamental to our roots in the community. Communities appreciate the efforts that NEG makes to grow with them.

Supporting the Younger Generation

Our educational support activities centered in Shiga Prefecture, where NEG is based, are aimed at getting youngsters interested in science. We also collaborate with universities to carry out glass-related research in order to foster future researchers and engineers.

Academic-Industrial Collaboration

We concluded a comprehensive university-industry collaboration agreement with the University of Shiga Prefecture in 2007. Based on that agreement, we have been collaborating with the university on a variety of ongoing projects, which include the establishment of an endowment course, joint research and technological exchange on glass engineering, and supporting the development of tomorrow's leaders.

In 2022, we signed an agreement with Kyoto University to establish an NEG endowment course in the basic science of glass. This is the first time for Kyoto University to adopt a trust method, a financial framework, to build a system for the continuous operation of the course.



Agreement with Kyoto University for an NEG endowment course

Supporting Shiga Prefecture's Lake Biwa Floating School Program

Since 2019, we have been supporting education and self-development through an environmental studies program for children in Shiga Prefecture. In 2023, NEG agreed to renew

the naming rights partnership contract with Shiga Prefecture in order to continue our support for another four years.

Visiting Lessons (Sponsorship of Otsu City Science Museum's "Innovation for the Future" classes for inventing, discovering, and making things)

To teach local elementary and junior high school students about glass applications and characteristics, NEG employees visit the Otsu City Science Museum to give hands-on lessons. There were 26 participants in this program in 2022.



Participation in JST Support Program for Female Students in Choosing Science Courses

In conjunction with the University of Shiga Prefecture, in 2020 we started participating as a collaborating enterprise in the Support Program for Female Students in Choosing Science Courses run by the Japan Science and Technology Agency (JST).

Welcoming Visitors to Our Plants and Showroom; Opening Our Facilities to the Local Community

- Visitors to our plants and showroom: Approx. 230
- Visitors to our facilities that are open to the public (green space, etc.): Approx. 310

Coexistence with Local Communities

To strengthen our ties with local communities, we carry out volunteer activities such as cleaning and planting greenery, host various events to which we invite local residents, and carry out donation and support activities.

Record of 2022 Activities (Inside and Outside Japan)

- Employees joining community activities: Approx. 360
- People visiting our summer festival and other events: Approx. 11,600
- People joining dialogue between the NEG Group and neighborhood councils: Approx. 70

Photographs of Main Events and Support Activities



Electric Glass (Xiamen): Employees clean the streets near the plant



Electric Glass Fiber America: Employees donated to a local charity

Corporate Governance

We aim to reach the targets set forth in our Medium-term Business Plan, EGP2026, by enhancing our competitiveness with a motivated Board of Directors and strengthened supervisory functions across management.

Our Corporate Governance Policy

We believe that to increase corporate value and achieve sustainable growth, it is essential to continue to ensure managerial transparency and strengthen supervisory functions

regarding the execution of business. This is our basic policy on corporate governance and we will strive to improve our organization and business systems in accordance with this policy.

Corporate Governance Structure

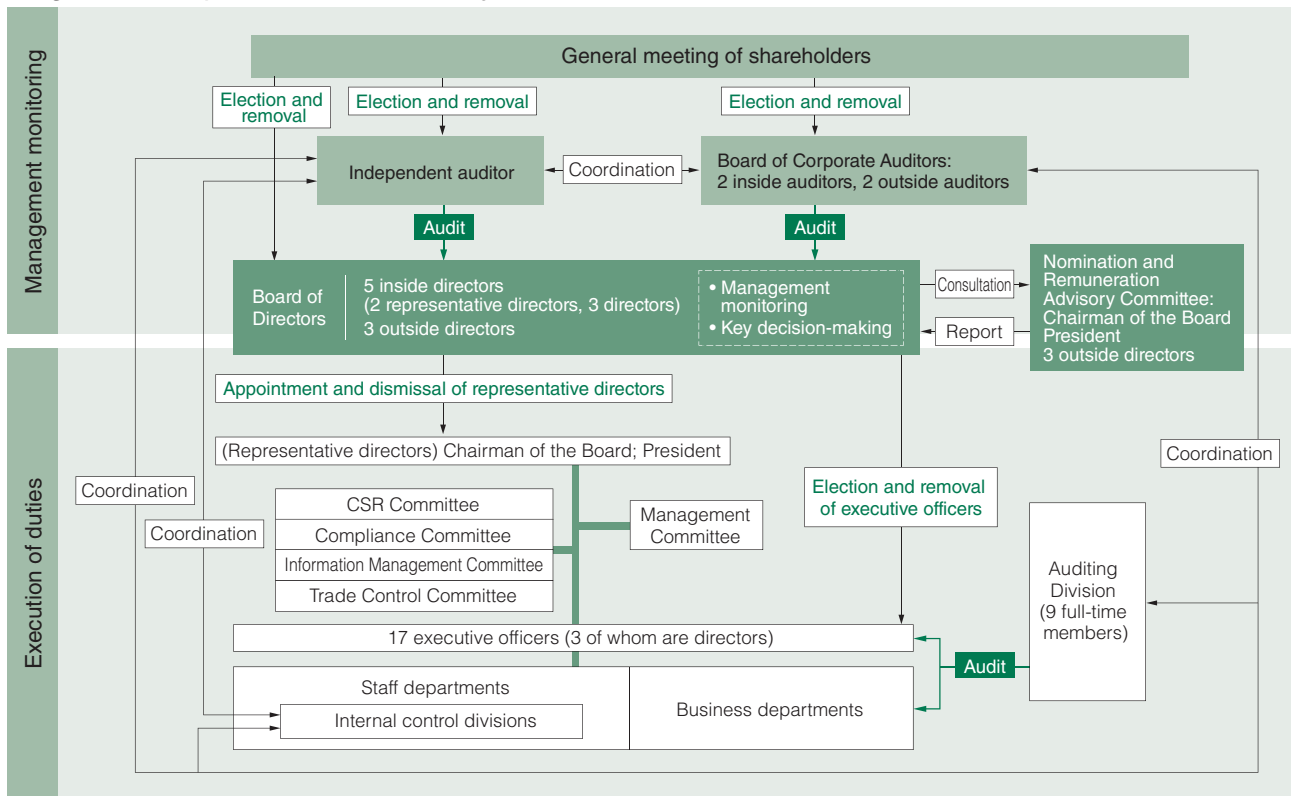
NEG is a company with a board of corporate auditors. The Board of Directors, which includes outside directors, carries out decision-making regarding the execution of duties and supervision of the execution of duties by directors and others. The supervision of the directors is carried out independently of the Board of Directors and the executive structure by the Board of Corporate Auditors, which includes outside corporate auditors. This system is intended to ensure the transparency and fairness of the Board of Directors.

Also, a Nomination and Remuneration Advisory Committee, which exists as a voluntary committee comprised mostly of outside directors and chaired by an outside director, has been established as an advisory body to the Board of Directors. The committee deliberates on the appropriateness of matters related to the appointment and dismissal of representative

directors, remuneration policies and systems for directors, and the amount of remuneration determined for directors. It then reports its conclusions to the Board of Directors.

In recent years, the number of issues, such as climate change, human capital, and human rights, that companies must address in order to achieve sustainable growth has been growing. Society increasingly expects companies to help solve the challenges facing it and to provide greater information disclosure. Therefore, in January 2023, we established the CSR Committee as a cross-organizational entity that engages in comprehensive discussion of the direction and content of our CSR activities. The committee makes recommendations to management, flexibly develops activities, and contributes to more appropriate information disclosure.

Diagram of Corporate Governance System (as of March 30, 2023)



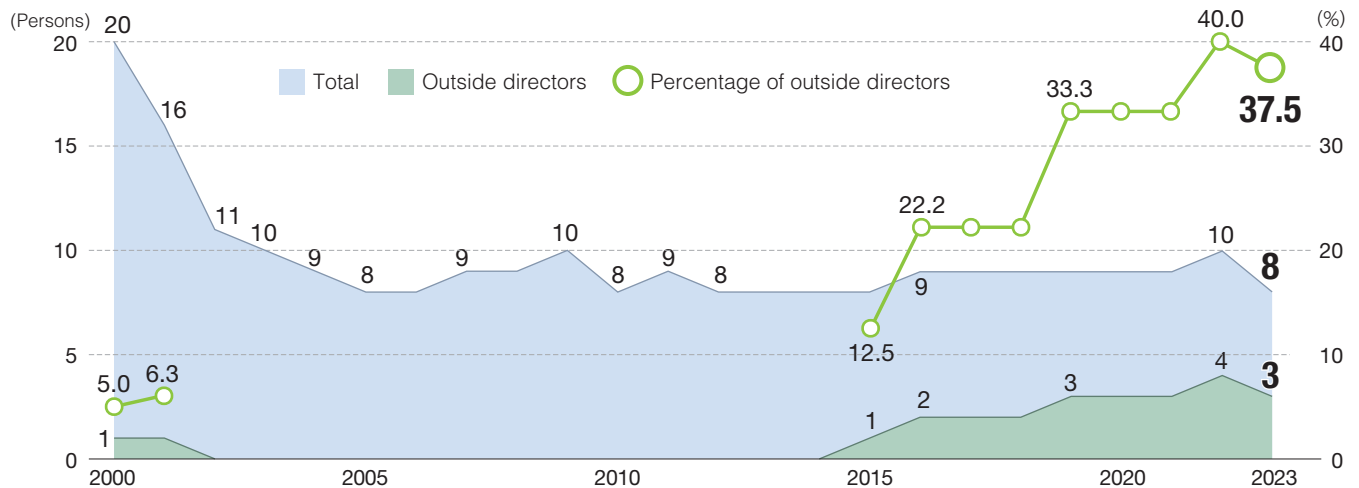
Journey towards Stronger Corporate Governance

	2000s	2010s	2020s
Settlement and shares	2006 Takeover defense measures introduced	2012 Takeover defense measures abolished	
Business execution supervision system	2001 Executive officer system introduced Start of reduction in number of directors	2015 First independent outside director appointed 2016 In total, two independent outside directors appointed Start of evaluation of Board of Directors effectiveness	2020 Nomination and Remuneration Advisory Committee established 2023 Non-Japanese executive officer appointed Corporate advisor system abolished
	2003 Term of office for directors shortened to one year First independent outside corporate auditor appointed	2019 In total, three independent outside directors appointed (outside directors now comprise one-third) System for granting restricted shares introduced First female outside director appointed	
Internal control and risk assessment	2000 Principles of Activities established 2003 Auditing Division established 2006 NEG Hotline whistleblowing system introduced Compliance Committee established	2015 Corporate Philosophy Structure established Business continuity planning formulated 2019 Whistleblowing system introduced for all group companies	2023 CSR Committee established

Reduction in Number of Directors and Change in Composition of the Board

In order to better expedite decision-making, ensure managerial transparency, and strengthen business execution functions, we have adopted an executive officer system. We have also revised the composition of the Board of Directors and reduced

the number of our directors. We will continue to optimize the Board's composition, as the times demand, in order to facilitate stronger governance.



Roundtable Discussion of the Outside Directors



Reiko Urade

Outside Director

Hiroyuki Ito

Outside Director

Shuichi Mori

Former Outside Director
(Resigned effective March 30, 2023)

Yoshio Ito

Outside Director

Note: This roundtable discussion was held on February 20, 2023.

Creating the next pillar of business by boosting our competitive and developmental capabilities under new leadership

— What sort of process was employed to choose the new president?

Mori Following its establishment in 2020, the Nomination and Remuneration Advisory Committee held a series of discussions about the policies and criteria that would guide the selection of representative directors. In the end, we adopted a selection standard that requires the chosen individual to “exhibit sincerity of character, insight, and skill, along with far-ranging knowledge and experience, a successful track record in his or her area of expertise, and the ability to exert strong leadership.” Then, last October, we were asked to offer our judgment concerning whether Akira Kishimoto, then a senior vice president, would be a suitable candidate for NEG’s next president. We asked then-president Motoharu Matsumoto various questions about Mr. Kishimoto and got detailed information on topics such as the reasons for which he was being recommended and his professional background. The advisory committee also

arranged for outside directors to interview him. During that interview, the outside directors asked Mr. Kishimoto a variety of questions about topics including his resolve and policies that would guide his management of the company. I wouldn’t go so far as to say that the experience was like lying on a bed of nails for Mr. Kishimoto, but he answered our questions more than adequately despite the atmosphere being quite tense. After convincing ourselves that we could approve Mr. Kishimoto as a candidate, we held another committee meeting with all members, including then-chairman Masayuki Arioka and Mr. Matsumoto to engage in further discussion and, ultimately, offer our official verdict on the matter as a committee. Although Mr. Kishimoto was not the sole candidate, I believe our decision was the result of carefully following the prescribed process as an independent committee.

Urade When I asked Mr. Matsumoto what thinking guided the selection of Mr. Kishimoto, he replied that NEG needs to

move quickly to establish the third and fourth pillars of business following the display and glass fiber businesses, and that Mr. Kishimoto was the right person for that job. After meeting Mr. Kishimoto and asking him about his resolve and management policies, I became convinced that he indeed was the right person for the job. In addition, he left me with a strong impression when he noted that he would continue to focus on environmental initiatives. Today, companies are under intense pressure to operate in a sustainable manner, and I could see that Mr. Kishimoto was taking that into consideration.

Y. Ito I was also satisfied by Mr. Kishimoto's thinking about the environment. He cited "consideration for the environment" as an especially important element of NEG's values. He's also aware that as a large energy consumer in Shiga Prefecture, NEG places a burden on the region. With regard to choosing executive leadership, there's a time for defensive management, and there's a time for reform; and those diverging needs lead to completely different results. Mr. Kishimoto's selection as a candidate signals a healthy sense of crisis with regard to the company's future, that NEG might not survive if it continues along its current path. In that sense, I feel that Mr. Matsumoto made a good choice.

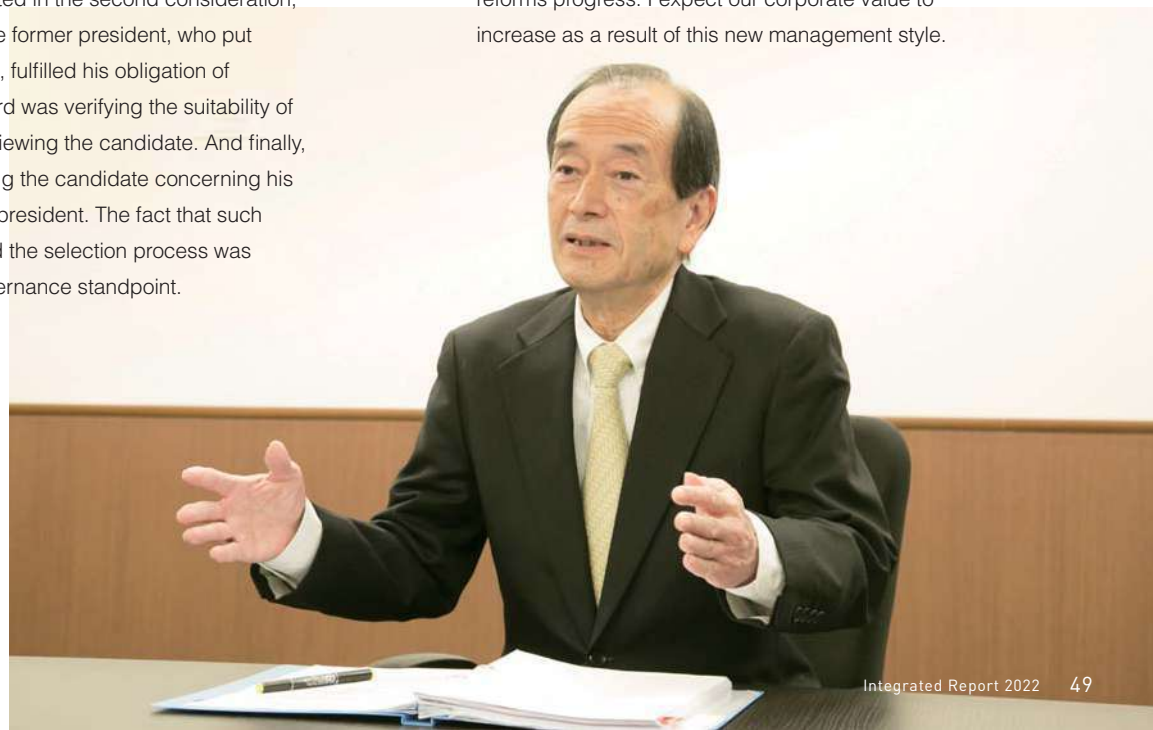
H. Ito This marked the first time for the advisory committee to participate in the selection of a president. We conducted a careful review that focused primarily on four key considerations. The first was ensuring that the proposal of a successor by the former president, who was familiar with management issues, had to be a reasonable one. We needed to verify that the former president was not just making a self-serving choice, but rather one with a solid basis. That resulted in the second consideration, that we ensure that the former president, who put forward the candidate, fulfilled his obligation of accountability. The third was verifying the suitability of the selection by interviewing the candidate. And finally, the fourth was querying the candidate concerning his resolve on becoming president. The fact that such considerations guided the selection process was significant from a governance standpoint.

— Tell us about your expectations towards, and recommendations for, President Kishimoto and the new leadership team.

Mori Mr. Kishimoto is an extremely honest person, and he offered a frank and objective assessment of NEG's weaknesses in terms of capabilities such as competitiveness, development, and human resources. There's a "golden rule" put forth by Jun'ichi Nagasaki, to all intents and purposes our founder (and third president), which holds that "customers teach us which leading-edge products to produce." Regarding this, President Kishimoto said that today we cannot realize state-of-the-art manufacturing simply by asking customers their needs, and from now on, we'll need to create one newly developed product after another, even if that may be a hit-or-miss proposition. Because he feels this way, I expect that under his leadership NEG will be able to create a new pillar of business for the future.

H. Ito That said, another issue is the need to further strengthen our competitiveness in displays and glass fiber, which are NEG's core businesses. These are businesses where President Kishimoto has not been directly involved to date. One major theme will be realizing strong management as a team together with people who have held positions of responsibility in these areas.

Y. Ito President Kishimoto said, "I would like to promote the value of our products not in terms of cost per ton, but rather in terms of cost per item." If we're pricing products on a per-item basis, we'll only be able to sell them if they have extremely high added value. We'll also need to operate at scale. President Kishimoto's approach struck me as an extremely fresh and welcome development. KPIs will presumably change as business reforms progress. I expect our corporate value to increase as a result of this new management style.





How would you assess NEG's current level of corporate governance?

H. Ito We receive minutes for each Management Committee meeting, and the secretariat provides explanations for materials used in Board of Directors meetings in advance. The Board provides a venue for truly open discussions, and executive officers regularly give reports on the company's operations. However, there are limits on how well we outsiders can understand all the relevant background factors for topics discussed by the Board. I feel that we'd learn a lot if there were a few more opportunities to speak with people involved with the actual operations of various departments. As an experiment along those lines, last year, outside directors requested to participate in a debriefing for R&D staff.

Urade That's right. It proved to be an extremely valuable opportunity to learn about young researchers' development work and results. I gained a new understanding of how their unrelenting pursuit of goals and efficient, waste-free technological development are NEG's strengths. With regard to corporate governance, our questions are always answered with sincerity and good faith, and I don't see any particular problems. However, if I had to cite something, we receive reports whenever something like an equipment problem occurs, but afterwards I'm left wondering how such issues were resolved. If they were indeed resolved, I would like to be informed about the situation, including about how the problem was solved.

Y. Ito When I became an outside director last year, Mr. Mori told me, "NEG is a highly ethical company." This change in top leadership is the area where I've most seen that for myself. Former chairman Mr. Arioka removed himself cleanly from the company's operations and said he would eliminate the role of corporate advisor, even if that

meant changing NEG's articles of incorporation. That left me feeling that NEG is a highly transparent and open company.

Mori Looking at transitions in corporate governance, during the mid-to-late 20th century, Japanese companies were run by charismatic leaders, and everyone sweated and rushed to do the job. NEG is fortunate to have been led by a series of extremely ethical management teams. As we entered the 21st century, the idea that vesting too much power in a single leader could be problematic prompted a gradual shift to a new approach, that is, governance structures that foster free discussion. I believe the role of an outside director is to serve as a watchdog for legal violations, but looking back over the last seven years, I haven't really had to worry too much about that aspect of my role. Even the most intense discussions at Management Committee meetings make their way into the minutes, and information is disclosed in an open manner. In this sense, too, I feel that governance is thoroughly and effectively functioning.





How do you feel about NEG's sustainability initiatives?

Urade First, with regard to the environment, the company is making a substantial effort in many ways, including rolling out all-electric melting processes in an effort to achieve carbon neutrality, and I find that highly praiseworthy. With regard to NEG's relationship with society, it is involved in various community service projects. One recent example is the establishment of an endowment course for basic glass research at Kyoto University. For that initiative, it adopted a trust method to ensure funding would be provided indefinitely into the future. NEG's eagerness is evident in how far it's willing to go to foster basic research into glass and human resource development. That said, with regard to diversity, there are issues with the promotion of female employees, and I'd like to see NEG take a more robust approach to hiring women. It goes without saying that the company's initiatives align with applicable laws and regulations, but I get the sense that people in NEG's line of business aren't particularly used to working alongside women. I think this sort of "awareness" problem can be solved as the number of female employees rises. It's frequently the case that involving people with various perspectives and attributes can jump-start research progress. For me, the issue is how to effectively realize diversity.

H. Ito Under conditions of low staffing, it's difficult to make the most of each employee's potential. NEG's current leadership recognizes the need to increase and foster the development of human resources as human capital. I think opening the company more to the outside by, for example, actively having employees participate in programs like outside workshops, is a great idea. It would also be interesting for top management to think seriously about how NEG's corporate culture and

characteristics could be renewed while retaining its good features.

Y. Ito The way I see it, the exceptional thing about NEG's stance on sustainability is how it declines to choose cost-cutting from a short-term perspective as a way to improve profits. The immediate business environment is quite challenging, but NEG's leadership has sent a strong message that it will not reduce either hiring or technological development funding. I believe this demonstrates excellent management decision-making. Recognizing that there are various themes to be pursued in forward-oriented technological development, I think establishing timelines and targets—apart from the question of whether a given technology does or doesn't become a viable business—would be a good idea. We can do our best to help NEG grow in a better direction by giving ideas and gathering opinions from such a perspective.

In closing, I'd like to ask if outgoing Mr. Mori, who will resign this fiscal year, has a message for us.

Mori NEG is a company that runs a tight ship, operating its business in a serious manner based on a tireless spirit of inquiry and sound technological capability. I'd like to see the company welcome more "rambunctious" people, employees who perhaps weren't star students, and tap their vitality as it strives to realize further growth. I'd like to see NEG work harder to set the hearts of such young employees afire. As for President Kishimoto, I feel he's been working hard to fulfill his responsibilities since assuming the position. Just as Mr. Matsumoto did before him, I'd like to see President Kishimoto address a variety of management issues through broad perspective and insight, taking into account factors such as the domestic and international situation.

Directors



Chairman of the Board
(Representative Director)
Motoharu Matsumoto

Apr. 1982 Joined Nippon Electric Glass
Jun. 2003 CEO of Techneglas Inc.
Feb. 2005 General Manager of Finance
Division
Apr. 2007 Vice President
Jun. 2011 Director (incumbent) and
Senior Vice President
Apr. 2013 Executive Vice President
Mar. 2015 President
Jan. 2023 Chairman of the Board and
Representative Director
(incumbent)



President
(Representative Director)
Akira Kishimoto
[Auditing]

Apr. 1985 Joined Nippon Electric Glass
Apr. 2012 General Manager, Electronic
Products Division, Production
Apr. 2013 Vice President
Jan. 2016 Group General Manager,
Electronic Products Group
Oct. 2017 Group General Manager,
Consumer Glass Products
Group
Jan. 2019 Senior Vice President
Jan. 2023 President (incumbent)
Mar. 2023 President and
Representative Director
(incumbent)



Director and Senior Vice President
Mamoru Morii

(General Affairs, Human Resources,
Purchasing, Information Systems, Sales
Management)
[Finance, Corporate Strategy, Marketing,
Tokyo Branch Office, Security Trade
Control]

Apr. 1985 Joined Nippon Electric Glass
Jun. 2014 General Manager, Finance
Division
Jan. 2017 Vice President
Jan. 2021 Senior Vice President
(incumbent)
Mar. 2022 Director (incumbent)



Outside Director
Reiko Urade
(Independent Director)

Apr. 2010 Professor, Graduate School of
Agriculture, Kyoto
University
Apr. 2018 Emeritus Professor, Kyoto
University (incumbent) and
Research Professor, Institute
for Integrated Radiation and
Nuclear Science, Kyoto
University (incumbent)
Mar. 2019 Outside Director of Nippon
Electric Glass (incumbent)

Corporate Auditors



Full-time
Masahiko Ohji

Apr. 1982 Joined Nippon Electric Glass
Oct. 2010 General Manager,
Development Division
Jan. 2015 Special Assistant to the
President
Mar. 2015 Full-time Corporate Auditor
(incumbent)



Full-time
Yoshihisa Hayashi

Apr. 1986 Joined Nippon Electric Glass
Mar. 2015 General Manager, General
Affairs Division
Mar. 2019 Full-time Corporate Auditor
(incumbent)

Executive Officers

Senior Vice Presidents

Norio Nakamura
[Consumer Glass Products Business]

Haruki Matsumiya
[Process Development & Engineering]

Masaaki Kadomi
[Research & Development]

Masahiro Kobayashi
[Electronic Products Business]

Hiroaki Nomura
[Glass Fiber Business]



Director and Senior Vice President
Hiroki Yamazaki

[Fundamental Technology, Intellectual Property, Environment, Quality Auditing, Product Safety Management, Cooperation in Research & Technology]

Apr. 1984 Joined Nippon Electric Glass
Oct. 2006 General Manager, Technical Division
Apr. 2011 Vice President
Jan. 2016 Group General Manager, Corporate Technology Group
Mar. 2016 Director (incumbent) and Senior Vice President (incumbent)



Director and Senior Vice President
Tomonori Kano

(Display Glass Business)
[Thin Film Business]

Apr. 1989 Joined Nippon Electric Glass
Mar. 2015 General Manager, Display Glass Division, Production
Jan. 2016 Vice President
Jan. 2020 Senior Vice President (incumbent)
Jan. 2021 Group General Manager, Display Glass Group (incumbent)
Mar. 2021 Director (incumbent)



Outside Director
Hiroyuki Ito

(Independent Director)

Apr. 2009 Professor, Faculty of Economics, Shiga University
Mar. 2020 Outside Director of Nippon Electric Glass (incumbent)
Apr. 2020 Emeritus Professor, Shiga University (incumbent) and Professor, Faculty of Business Administration, Osaka University of Economics (incumbent)



Outside Director
Yoshio Ito

(Independent Director)

Apr. 1973 Joined Matsushita Electric Industrial Co., Ltd. (currently Panasonic Holdings Corporation)
Jun. 2014 Representative Director, Senior Managing Director of Panasonic Corporation
Apr. 2017 Representative Director, Vice President of Panasonic
Jun. 2017 Representative Director, Executive Vice President of Panasonic
Jun. 2019 Retired from Panasonic
Jun. 2020 Outside Director of Kameda Seika Co., Ltd. (incumbent)
Jun. 2021 President of the Japan-China Economic Relations and Trade Centre (incumbent)
Mar. 2022 Outside Director of Nippon Electric Glass (incumbent)



Outside
Yukihiro Yagura

(Independent Corporate Auditor)

Oct. 1992 Joined Tohmatsu Audit Corporation (currently Deloitte Touche Tohmatsu LLC)
Apr. 1996 Registered as certified public accountant
Jun. 2020 Left Deloitte Touche Tohmatsu LLC
Jul. 2020 Established Yagura-jicpa (incumbent)
Aug. 2020 Registered as certified public tax accountant
Mar. 2022 Outside Corporate Auditor of Nippon Electric Glass (incumbent)



Outside
Hiroji Indo

(Independent Corporate Auditor)

Apr. 1989 Registered as attorney at law and joined Showa Law Office
Jan. 1994 Partner, Showa Law Office
May 1998 Established Habataki Law Office, Partner (incumbent)
Jun. 2020 Outside Corporate Auditor of Keyence Corporation (incumbent)
Mar. 2023 Outside Corporate Auditor of Nippon Electric Glass (incumbent)

Vice Presidents

Takuo Horiuchi

[Display Glass Business (Sales), Sales Management]

Hitoshi Kanaya

[Process Development & Engineering]

Toshiyuki Nakajima

[General Affairs, Human Resources]

Hidetaka Oda

[Display Glass Business (Production)]

Yoshiyuki Tamamura

[Purchasing, Information Systems]

Ken Hamajima

[Glass Fiber Business (Production)]

Takuji Oka

[Electronic Products Business (Production)]

Masanori Wada

[Consumer Glass Products Business (Production)]

Eric Barrouillet

[Glass Fiber Business (Sales)]

Note: () means "supervising" and [] means "in charge" indicating work assignments of executive officers.

Compliance and Risk Management

To maintain public trust and to achieve sustainable growth, every employee and executive of our Group is expected to comply with laws and international rules, and consistently act in accordance with our organization's high ethical standards.

Compliance System

We established our Compliance Committee as a specialized body that ensures our Group members continue to comply with laws and regulations. The Committee also provides information on corporate ethics and is primarily focused on the items listed at right.

- Drafting revisions to the Group Code of Conduct and Principles of Activities
- Collecting and analyzing information on compliance and providing compliance training
- Managing a whistleblowing system (NEG Hotline)

Compliance Program

Group Code of Conduct and Principles of Activities

To ensure that all employees are informed on compliance matters, we have established the Group Code of Conduct and Principles of Activities. Wallet-sized cards printed with the Corporate Philosophy Structure, Code of Conduct, Principles of Activities, and an introduction to the NEG Hotline are distributed to employees of group companies in Japan.

Whistleblowing System

A whistleblowing system called the NEG Hotline has been established to help prevent any illegal violations, wrongdoings, or unethical acts and to promote early detection and quick resolution should such acts occur. We have established two consultation hotlines, one that connects employees to the Compliance Committee (internal contact point) and another that connects to an attorney's office (outside contact point). The confidentiality of the informants is strictly protected at both contact points, so that no unfair treatment will occur.

This whistleblowing system has been set up at all of our subsidiaries, including those outside of Japan, and we are working to ensure that our stakeholders know about the system and that it functions properly.

Ensuring Compliance

To raise compliance awareness (for example, for high ethical standards and respect for human rights) throughout our Group, each year we carry out compliance training as a part of an education program for newly hired employees and antitrust seminars for employees engaged in sales activities. We also ensure awareness among management by holding workshops for directors and executive officers. At these sessions, participants take the opportunity to discuss themes such as governance and compliance. In addition, we have designated October as the month for strengthening compliance. We conduct compliance-related lectures and workshops throughout our Group companies both in Japan and overseas, and also put up compliance awareness posters throughout our facilities. Moreover, we ask all executives and employees in Japan and overseas to provide the company with signed declarations each year promising that they will abide by the Principles of Activities. This gives them the opportunity to reflect on how they carry out their work in terms of compliance.

UK Modern Slavery Act

Subsidiary Electric Glass Fiber UK, Ltd. has published a transparency statement pursuant to Section 54 of the UK Modern Slavery Act 2015.

Risk Management

Our Group reviews business risks on a periodic basis, based on our policy on internal control, and takes the necessary steps to manage such risks. In cases involving any business risks that are deemed significant, responsible divisions or

specialized committees formulate regulations and guidelines, conduct training, prepare manuals, and undertake additional activities as deemed necessary.

Communicating with Stakeholders

We declare in our Group Code of Conduct that we disclose necessary corporate information in a timely and appropriate manner, and communicate on a broad basis with stakeholders. To enhance our corporate value, we strive to maintain active communication and deepen mutual understanding with various stakeholders.

Communicating with Customers

The principle of “customer first” is a key value in our corporate philosophy structure, and a commitment to being the world’s best in customer satisfaction is one of our essential management policies. We have basic policies for product safety and quality assurance, through which we aim to further improve customer satisfaction and deliver safe, reliable, and high-quality products.

Product Safety Basic Policy

We always offer safe products that consumers can use without worry.

1. Place the utmost importance on ensuring product safety from the design stage.
2. Continue to improve product safety through quality assurance.
3. Continue to reduce risks throughout the product life cycle.
4. In case of an accident involving our product, disclose information and ensure product safety promptly.

Quality Assurance Basic Policy

Under the principle of “customer first,” we offer products that satisfy customers through the cooperation of all divisions involved in product sales, manufacturing, and development.

1. Properly understand customer needs for products and continue to reflect these needs in product specifications.
2. Market products that comply with appropriate quality assurance standards.
3. Continue to improve product quality and enhance the level of manufacturing that ensures product quality.
4. Take prompt and appropriate action to manage any problems reported by customers.

Communicating Product Information

We use exhibitions and our website as communication tools for introducing products and providing various relevant information.

Exhibitions

<https://www.neg.co.jp/en/company/exhibition/>

Communicating with Business Partners

Basic Procurement Policy

Under the basic procurement policy that we have established, we seek to build up reliable relationships with business partners who can provide us with a stable supply of products and services of superior quality at competitive prices. In order to enhance the performance and efficiency of the entire supply chain, we ask our business partners to agree to produce a stable supply following our supply chain guidelines, improve their competitiveness, comply with laws and regulations, respect human rights, and protect the environment.

Minerals (such as tin, tantalum, tungsten, and gold) sourced

in the Democratic Republic of the Congo and adjoining countries are used to finance armed groups carrying out inhumane acts.

We place great importance on responsible procurement practices to ensure we do not source conflict minerals that are tied to human rights violations and environmental destruction.

Basic
Procurement
Policy

- ① Open and fair business dealings
- ② Harmonious mutual prosperity with partners
- ③ Compliance with social norms and respect for human rights
- ④ Environmental consciousness

Procurement Policy and Guidelines

<https://www.neg.co.jp/en/company/procurement/>

Communicating with Shareholders and Investors

Information Disclosure Tools

Through the use of the Tokyo Stock Exchange’s Timely Disclosure Network (TDnet), and by posting information on our website in a timely fashion, we ensure that we provide prompt disclosure of information according to the rules for disclosure established by the Tokyo Stock Exchange. Furthermore, with

regard to information that we believe will assist our stakeholders in gaining a better understanding of our Group, we make active use of news releases and web pages to present such information in a timely, appropriate, and fair manner, in accordance with Japan’s Fair Disclosure Rules.

Basic Stance on Information Disclosure

<https://www.neg.co.jp/en/ir/disclosure/>

Consolidated Financial Data from the Past 10 Years

Nippon Electric Glass Co., Ltd. and consolidated subsidiaries

*Fiscal year ended December 31, 2014 was a nine-month period due to a change in the fiscal year-end.

	2014/3	2014/12*	2015/12	2016/12
Results of operations				
Net sales	¥252,548	¥192,692	¥251,178	¥239,412
Operating profit	16,171	5,224	22,035	19,571
Profit (loss) attributable to owners of the parent	12,432	5,938	9,637	4,969
Depreciation and amortization	35,891	28,420	37,154	31,256
Capital expenditures	46,962	45,214	49,212	46,429
Research and development	6,920	5,527	6,183	6,658
Financial status				
Total assets	¥707,021	¥731,185	¥726,938	¥693,918
Current assets	247,502	264,001	267,430	254,870
Net property, plant, and equipment	393,751	397,273	386,013	367,399
Current liabilities	86,970	82,701	105,400	86,025
Interest-bearing debt	99,492	109,141	109,731	101,997
Net assets	510,807	522,577	519,801	509,564
Cash flows				
Cash flows from operating activities	¥46,700	¥38,837	¥46,797	¥48,261
Cash flows from investing activities	(33,843)	(29,264)	(32,638)	(36,139)
Cash flows from financing activities	(11,190)	1,699	(7,892)	(17,624)
Cash and cash equivalents at end of year	123,888	129,823	133,856	126,167
Per share of common stock (yen and dollars)				
Net income (loss)	¥124.97	¥59.69	¥96.88	¥49.95
Net assets	5,057.28	5,163.32	5,159.30	5,069.60
Cash dividends	80.00	60.00	80.00	80.00
Financial indicators (%)				
Operating margin	6.4	2.7	8.8	8.2
Equity ratio	71.2	70.2	70.6	72.7
Return on equity	2.5	1.2	1.9	1.0

Notes: 1. Net income (loss) per share and net assets per share are calculated based on the average number of shares outstanding during each year and the number of shares outstanding at the end of each year, respectively.

2. As there was no dilutive stock outstanding during these years, diluted net income per share was not calculated.

3. As of December 31, 2022, Nippon Electric Glass Co., Ltd. had 25 consolidated subsidiaries and 1 affiliated company accounted for by the equity method.

4. Capital expenditures for the fiscal year ended December 31, 2014 were calculated based on the period from April 1, 2014 to December 31, 2014 for NEG and its domestic consolidated subsidiaries and the period from January 1, 2014 to December 31, 2014 for NEG's overseas consolidated subsidiaries.

5. Per share of common stock amounts are retroactively adjusted for subsequent stock consolidation. On July 1, 2017, common shares were consolidated at a ratio of 5 to 1 based on the number of shares held by shareholders of record as of June 30, 2017.

(Millions of yen and thousands of U.S. dollars, unless otherwise specified)

	2017/12	2018/12	2019/12	2020/12	2021/12	2022/12	
	¥282,447	¥300,327	¥257,511	¥242,886	¥292,034	¥324,635	\$2,440,865
	32,202	24,866	16,258	17,661	32,780	26,184	196,872
	27,184	15,200	(33,670)	15,253	27,905	28,168	211,790
	28,735	29,776	28,576	24,932	26,721	28,962	217,759
	52,913	49,340	20,160	23,447	44,894	68,024	511,459
	6,898	6,959	6,901	6,259	6,599	7,266	54,632
	¥764,420	¥725,320	¥664,801	¥658,140	¥698,130	¥747,907	\$5,623,361
	262,932	247,742	241,483	246,400	264,512	271,680	2,042,706
	393,818	386,541	358,682	355,728	380,281	425,630	3,200,226
	103,836	112,992	96,485	103,577	117,935	131,665	989,962
	120,661	112,005	100,479	103,687	96,823	105,525	793,428
	543,789	521,548	477,155	476,920	499,743	528,912	3,976,782
	¥46,160	¥52,002	¥21,637	¥47,862	¥69,882	¥31,563	\$237,316
	(68,644)	(19,551)	(14,317)	(19,760)	(31,755)	(57,155)	(429,737)
	9,797	(28,503)	(21,976)	(7,739)	(29,178)	(5,874)	(44,166)
	113,835	116,249	100,977	121,215	134,723	106,863	803,481
	¥273.29	¥154.26	¥(348.50)	¥157.84	¥290.98	¥302.76	\$2.28
	5,416.93	5,346.03	4,885.50	4,886.10	5,321.77	5,635.52	42.37
	90.00	100.00	100.00	100.00	110.00	120.00	0.90
	11.4	8.3	6.3	7.3	11.2	8.1	
	70.5	71.2	71.0	71.7	70.9	70.1	
	5.2	2.9	(6.8)	3.2	5.8	5.5	

6. NEG and its consolidated subsidiaries have applied the "Partial Amendments to Accounting Standard for Tax Effect Accounting" (Accounting Standards Board of Japan [ASBJ] Statement No. 28, February 16, 2018) from the fiscal year ended December 31, 2019. Accordingly, total assets and current assets for the fiscal year ended December 31, 2018 reflect the retroactive application of this standard.

7. NEG and its consolidated domestic subsidiaries have applied the "Accounting Standard for Revenue Recognition" (Accounting Standards Board of Japan [ASBJ] Statement No. 29, March 31, 2020) and the relevant revised ASBJ regulations from the beginning of the fiscal year ended December 31, 2022. Accordingly, consolidated financial statements for that fiscal year reflect the application of this standard and the relevant revised ASBJ regulations.

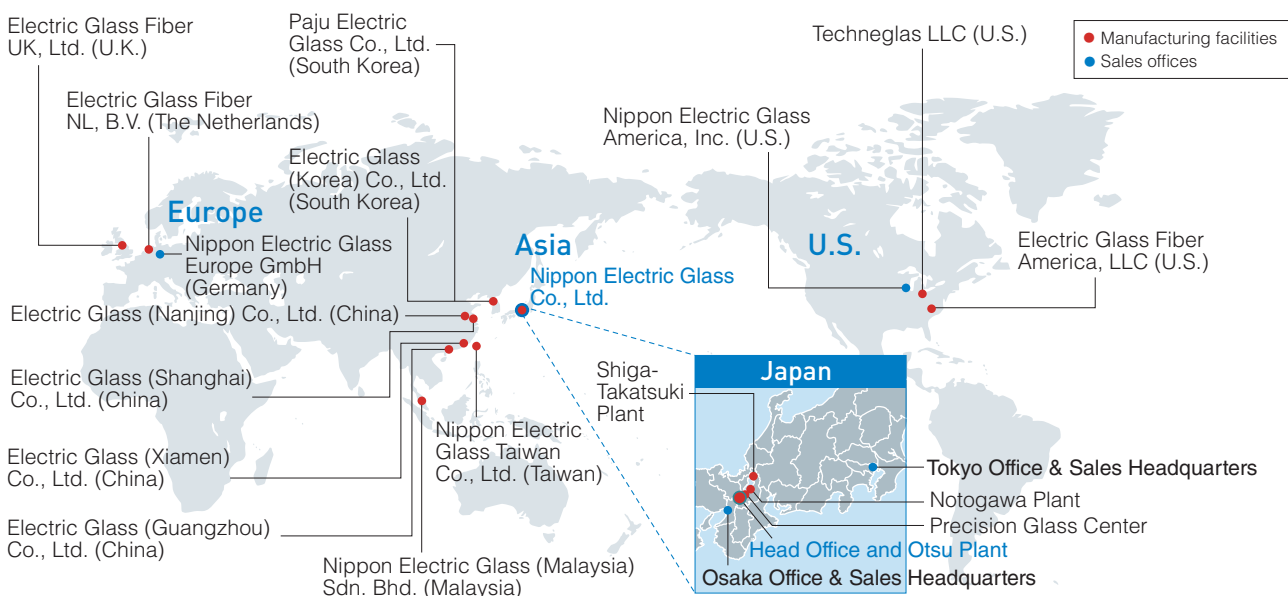
8. U.S. dollar amounts have been translated from Japanese yen solely for the convenience of the reader using the prevailing exchange rate at December 31, 2022 of ¥133 to U.S. \$1.00.

Corporate Information

Corporate Profile

Company name	Nippon Electric Glass Co., Ltd.	Founded	December 1, 1949
Head office	7-1, Seiran 2-chome, Otsu, Shiga 520-8639, Japan Tel: +81-77-537-1700	Plants (in Japan)	Otsu, Shiga-Takatsuki, Notogawa, Precision Glass Center
Sales headquarters (Osaka)	10F, Sumitomo Seimei Shin-Osaka Kita Bldg., 1-14, Miyahara 4-chome, Yodogawa-ku, Osaka 532-0003, Japan Tel: +81-6-6399-2711	Capital	32,155 million yen
(Tokyo)	9F, Shinagawa Grand Central Tower, 16-4, Konan 2-chome, Minato-ku, Tokyo 108-0075, Japan Tel: +81-3-5460-2510	Number of employees	6,349 (consolidated, as of December 31, 2022)
		Stock exchange listings	Tokyo Stock Exchange (Prime Market)
		Securities code	5214
		Fiscal year	January 1 to December 31 of each year
		Ordinary general meeting of shareholders	Held each year in March
		Transfer agent for common stock	Sumitomo Mitsui Trust Bank, Limited

Global Operations

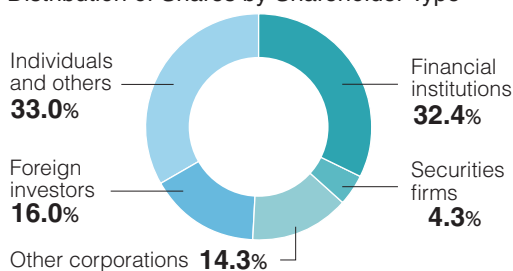


Stock Information (as of December 31, 2022)

Information about NEG Stock

Total number of shares authorized to be issued	240,000,000 shares
Total number of shares issued	99,523,246 shares
Shares per unit	100 shares
Total number of shareholders	44,870

Distribution of Shares by Shareholder Type



Major Shareholders

Shareholder	Number of shares held (thousand shares)	Shareholding ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	14,167	15.2
Nipro Corporation	9,505	10.2
Custody Bank of Japan, Ltd. (Trust Account)	5,993	6.4
SMBC Nikko Securities Inc.	2,263	2.4
The Bank of New York Mellon 140051	1,941	2.1
The Shiga Bank, Ltd.	1,617	1.7
Keimitsu Kin	1,600	1.7
Japan Securities Finance Co., Ltd.	1,326	1.4
NEG Business Partner Shareholding Association	1,203	1.3
BNY GCM Client Account JPRD AC ISG (FE-AC)	1,117	1.2

Notes: 1. NEG holds 6,480,511 treasury shares, and these are excluded from the major shareholders indicated above.
2. The ratio of shareholding is calculated by excluding treasury stock.

Web and Social Media Directory

Website

<https://www.neg.co.jp/en/>



LinkedIn

<https://www.linkedin.com/company/nippon-electric-glass-co-ltd>



YouTube



<https://www.youtube.com/@nipnonelectricglassco.ltd.9256>

Twitter



https://twitter.com/NEG_PR

New Logo



We've created a logo for a global audience based on the English letter acronym, "NEG," by which we have long been known, both inside and outside the company.

The thick, monospaced lines represent reliability and stability, while the overall roundedness represents how we are a company that flexibly pursues growth in harmony with the surrounding environment. Its form has both an essential simplicity and timelessness, and it is clearly recognizable even on a small screen.

The "N" at the start of the logo is capitalized, as "N" is the letter by which our customers recognize "Nippon Electric Glass," as well as being the letter marked on some of our products.

ESG Databook

For stakeholders who are particularly interested in learning about our ESG-related investment, we have compiled the ESG-related information from the Integrated Report 2022, the NEG website, and from elsewhere into our ESG Databook 2022.

Visit <https://www.neg.co.jp/en/csr/> to download the ESG Databook 2022.



Editorial Policy

Organizations Covered

The Nippon Electric Glass Group's 10 companies in Japan and 15 companies outside Japan are covered in this report. In cases where the coverage area of the data differs, we have indicated the appropriate coverage areas respectively.

Period of Reporting

Fiscal 2022 (January 2022 to December 2022). Some qualitative information regarding fiscal 2023 has also been included in this report.

Publication, Next Scheduled Publication

Issued in May 2023. Next scheduled issue in May 2024.

Editorial Guidelines

IFRS International Integrated Reporting Framework, GRI Standards, and others.

The GRI Content Index can be found at <https://www.neg.co.jp/en/csr/>

Disclosure Policy

The Group Code of Conduct stipulates that our Group will disclose necessary corporate information in a timely and appropriate manner to enhance communication with concerned parties.

Following this policy, we will continue to disclose important information related to our Group's activities to all stakeholders, including shareholders and investors, in a timely and appropriate manner.

Caution Concerning Forward-looking Statements

Statements in this Integrated Report with respect to our Group's plans, outlooks, strategies, and other statements that are not historical facts, are forward-looking statements involving risks and uncertainties.

NEG

Nippon Electric Glass

<https://www.neg.co.jp/en/>

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