

GLASS FOR FUTURE



**Nippon Electric Glass**

# Integrated Report 2021

For the year ended December 31, 2021



## Corporate Philosophy

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.

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### Our corporate philosophy

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We strive to build a brighter future for the world by uncovering the unlimited possibilities of glass for more advanced creative manufacturing.

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.

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### Our slogan

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***GLASS FOR FUTURE***

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## Our vision

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# 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.

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## Our values

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### Customer first:

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

### 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.

## Contents

### About Nippon Electric Glass

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- 2 Message from the Chairman
- 4 Products and Business Fields
- 8 Financial and Non-financial Highlights

### Value Creation Story

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- 10 History of Transformations and Advances
- 12 Strengths of Nippon Electric Glass
- 14 Value Creating Process
- 16 Value Chain

### Value Creation Strategies

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- 18 Message from the President
- 22 New Medium-term Business Plan "EGP2026"

### Value Creation in Practice

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- 24 Research and Development
- 26 Special Feature  
Developing an All-solid-state Sodium-ion Secondary Battery
- 28 Business Overview  
Electronics and Information Technology  
Display-related Business  
Optical and Electronic Device-related Business
- 32 Business Overview  
Performance Materials and Others  
Glass Fiber-related Business  
Medical Care, Heat Resistance, and Building Material-related Business

### The Foundation of Value Creation

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- 36 Corporate Governance
- 39 Roundtable Discussion of the Outside Directors
- 42 Directors, Corporate Auditors, Executive Officers
- 44 Compliance and Risk Management
- 46 CSR Foundation
- 48 Environment
- 50 Special Feature  
Our Initiatives for Carbon Neutrality
- 52 Diversity and Inclusion
- 54 Voices for Diversity
- 55 Community Contribution
- 56 Communicating with Stakeholders

### Financial & Corporate Information

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- 58 Nippon Electric Glass Co., Ltd. and Consolidated Subsidiaries for the Ten Most Recent Years
- 60 Corporate Information
- 61 Web Directory



## Message from the Chairman

Quality manufacturing is  
the driving force behind carbon neutrality.



A handwritten signature of Masayuki Arioka in black ink.

Masayuki Arioka  
Chairman of the Board



In retrospect, the year 2021 was marked by a trial-and-error effort to maintain the functioning of the economy in the midst of the stringent safety measures implemented to fight the COVID-19 pandemic. As one significant example, the Tokyo 2020 Olympic and Paralympic Games were held in the absence of spectators.

Despite the pandemic, we experienced strong demand for display glass, glass fiber for use in resin-reinforced plastic for automobiles, and glass tubing for pharmaceutical and medical use including vaccine containers. In order to supply these products, we implemented comprehensive measures against the spread of the infection as we took steps to accommodate the strong customer demand. We are grateful to our stakeholders for their support, as we were able to achieve positive results that exceeded our expectations.

Against this background, the UN Climate Change Conference in Glasgow known as COP26, which concluded on November 13, 2021, agreed to reductions in coal-fired power generation in order to limit the global temperature rise to 1.5 degrees. Some believe this target is inadequate and yields to the interests of the various signatory nations, but I think the efforts to reduce CO<sub>2</sub> emissions for the future of this planet shared by all of humanity are now on a clear forward trend.

Glass, which is the heart of our business, is one of the oldest materials made by humankind, as evidenced by the excavation of glass artifacts from archaeological sites thousands of years old. Since glass manufacturing requires that the glass be heated to very high temperatures, the history of glass is linked to the history of energy. Wood served as that source of energy in ancient Roman times when the glass industry first prospered. Later, glass makers moved their operations to the undeveloped parts of the Roman Empire in their quest for timber, which also served to expand the glass industry to neighboring countries.

However, it wasn't possible to make high-quality glass products in large quantities until the emergence of the Industrial

Revolution. The Industrial Revolution arrived with the invention of electrical devices as well as coal energy, the steam engine, automated machinery, and incandescent light bulbs. In the glass industry, the conversion from wood to coal energy led to quantitative growth, while the invention of electrical devices led to the production of glass for electronic devices, which contributed to qualitative growth.

The subsequent development of the electronics industry, which contributed to the widespread adoption of household appliances, required ever higher quality and even more types of highly functional glass. This marked the arrival of the real energy revolution. At the time of our founding in 1949, that energy came from coal. During that time, our workers would be black from coal soot at the end of their shifts. Some say that when no showers were available, the workers would bathe in the factory pond before returning home.

Soon after, pollution control measures were adopted and improvements to product quality were needed. As a result, coal was no longer used and cleaner forms of energy such as heavy bunker C and bunker A oil, kerosene, and LPG energy were substituted for use in glass production. Then, in 2010, we adopted natural gas as our fuel and completely halted the use of heavy oil. Now, in search of cleaner and higher quality glass, we are taking steps to convert to using electricity for all the energy required by our glass manufacturing operations.

At Nippon Electric Glass, our history of improving the quality of glass has also set us on the path to reducing our CO<sub>2</sub> emissions. That is why we, as a manufacturer of special glass, are leading the way towards carbon neutrality. This has not been an easy task, as energy conversion in the glass industry leads to significant changes in equipment and operating conditions. Although high technical hurdles remain, we are confident that our strong focus on making glass of ever higher quality will pave the way to our goal of carbon neutrality.



## 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

#### Hospitals

- Glass tubing for pharmaceutical and medical use



- LX Premium, radiation shielding glass

#### Shopping centers

- FireLite™ fire-rated glass



- Invisible Glass™ for use in showcases
- GlassOre™ Glass Brick

#### Train stations

- Lamion™ for train station platform doors



- Neopariés™ glass-ceramics building material

#### 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.

### Engine bay

- Glass fiber for strengthening functional plastics



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

### Instrument panels

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



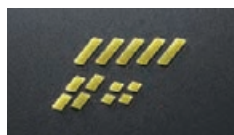
### Roof liner materials

- Glass fiber mat



### Front end

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



- Glass valves for turn signals

### Cameras and sensors

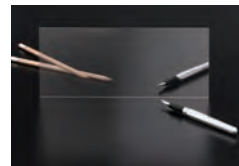
- Cover glass for image sensors



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

### Smart room mirror

- Dielectric-mirror (Half-mirror)



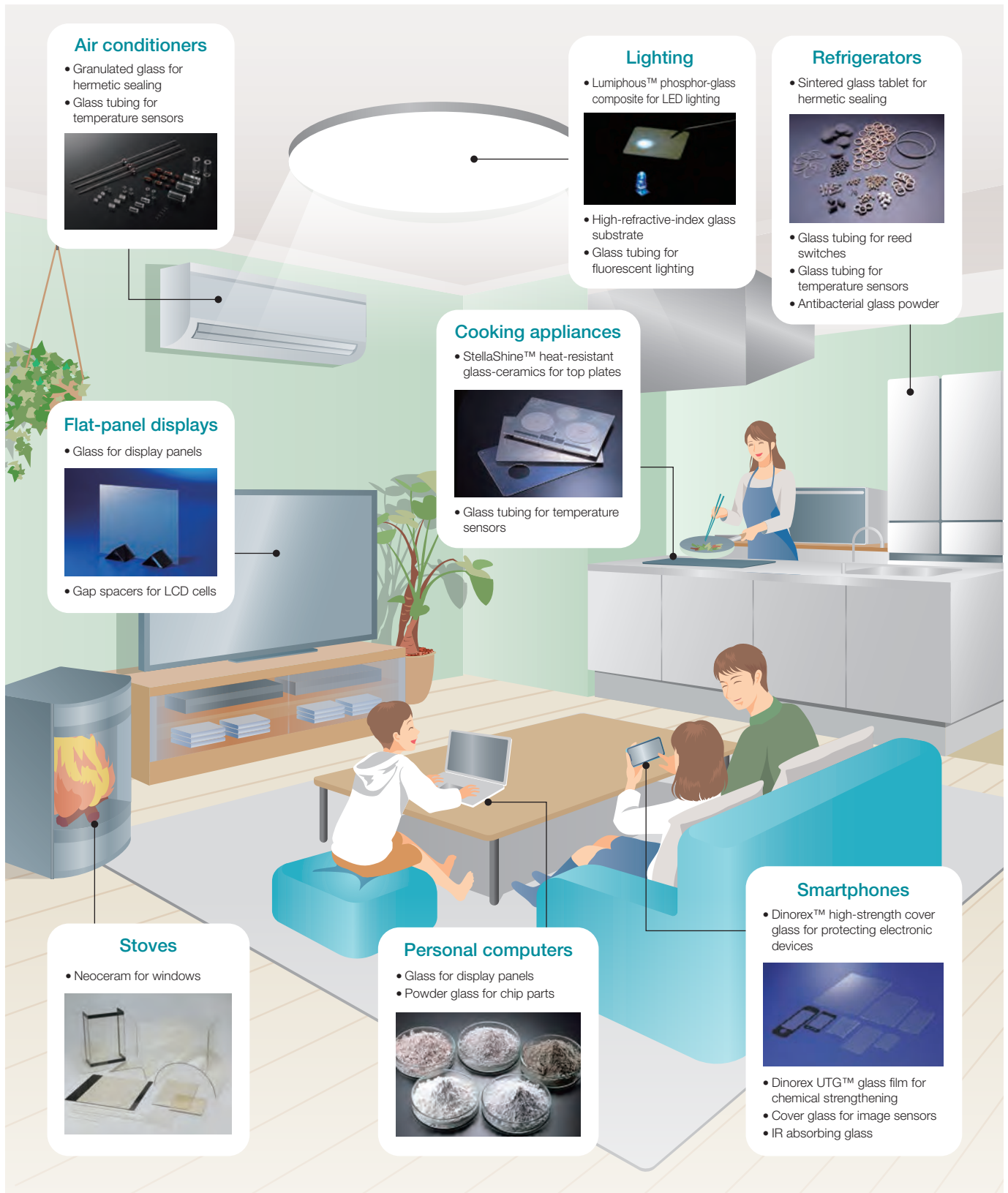
- Glass for display panels



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.



## Network

## Supporting technological innovation in an increasingly sophisticated information-reliant society

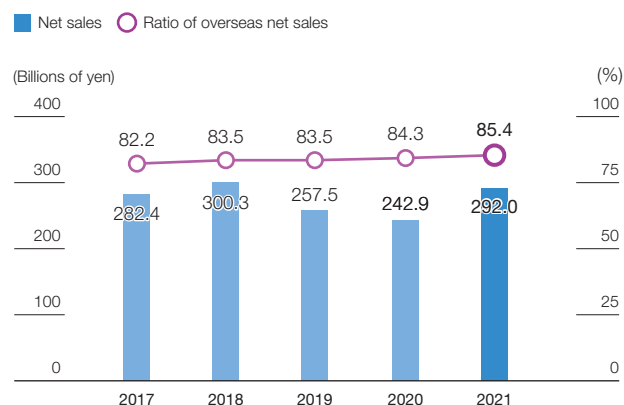
Our glass must exhibit superiority in terms of optical properties, formability, workability, dimensional accuracy, and airtightness in order to improve the stability, reliability, and convenience of communication.



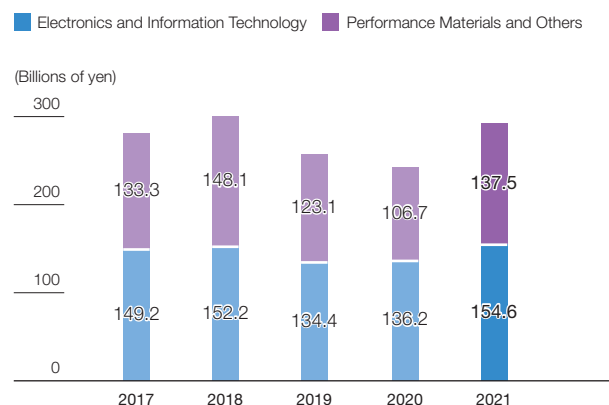
# Financial and Non-financial Highlights

## Financial Highlights (Consolidated)

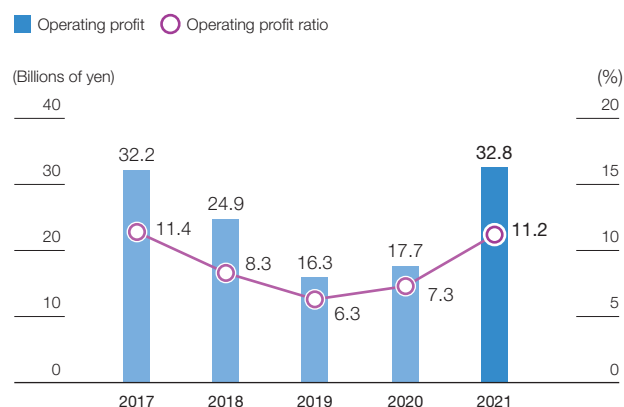
### Net Sales, Ratio of Overseas Net Sales



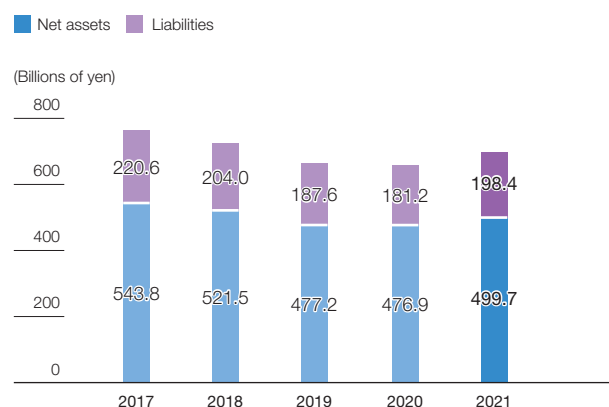
### Sales by Business Segment



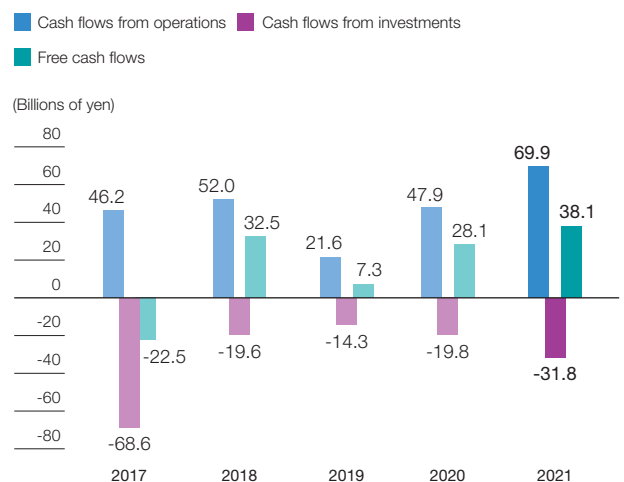
### Operating Profit, Operating Profit Ratio



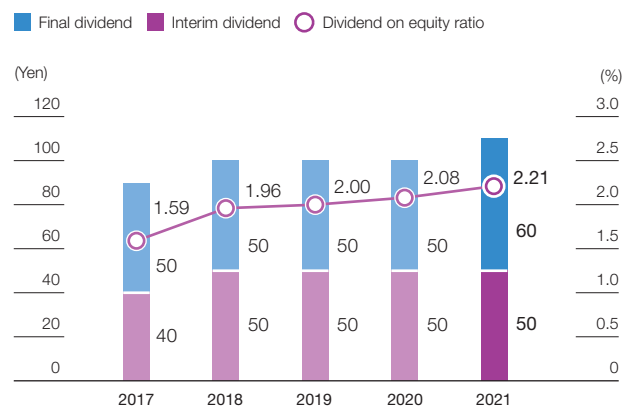
### Net Assets, Liabilities



### Cash Flows



### Cash Dividends per Share<sup>1</sup>, Dividend on Equity Ratio

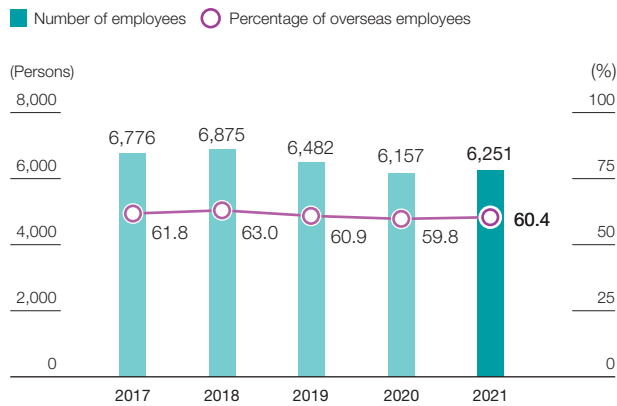


<sup>1</sup>Per share of common stock amounts are retroactively adjusted for subsequent stock consolidation. On July 1, 2017, common shares were consolidated at a ratio of 5 to 1 based on the number of shares held by shareholders of record as of June 30, 2017.

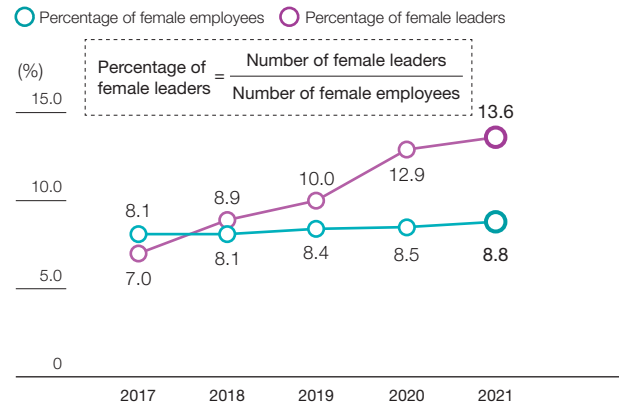


## Non-financial Highlights

### Number of Employees, Percentage of Overseas Employees (consolidated)

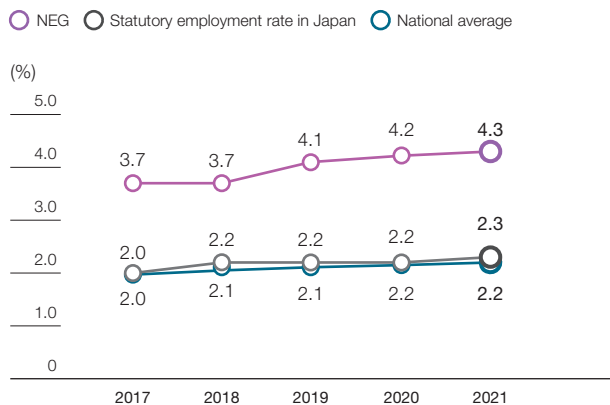


### Percentage of Female Employees and Female Leaders (NEG)<sup>2</sup>

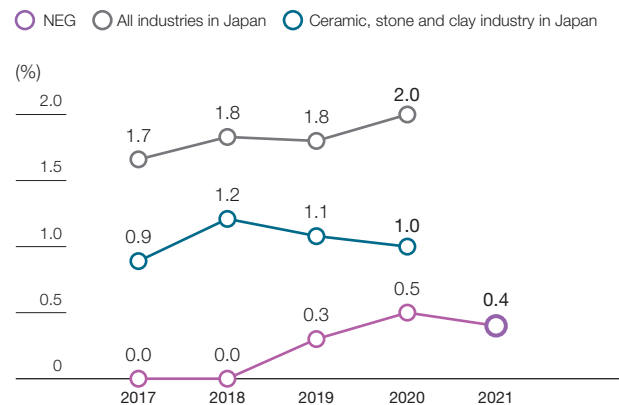


<sup>2</sup>A female leader is a female employee who oversees and manages subordinates.

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

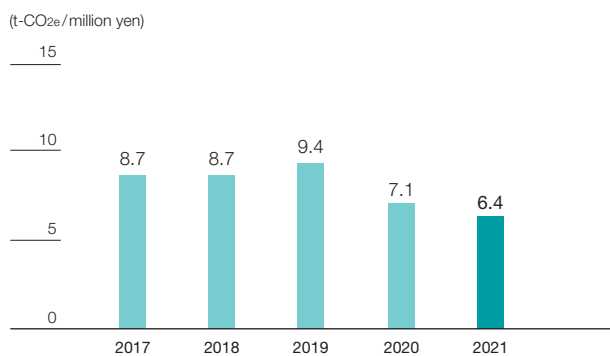


### Industrial Accident Frequency Rate (NEG)<sup>3</sup>



<sup>3</sup>Aggregation period: January 1–December 31 annually for NEG; April 1–March 31 of the following year annually for all industries and for the ceramic, stone and clay industry

### CO<sub>2</sub> Emissions Intensity (to consolidated sales)<sup>4</sup>



<sup>4</sup>The figures for fiscal 2020 have been revised.

### Water Intake / Waste Water Intensity (to consolidated sales)



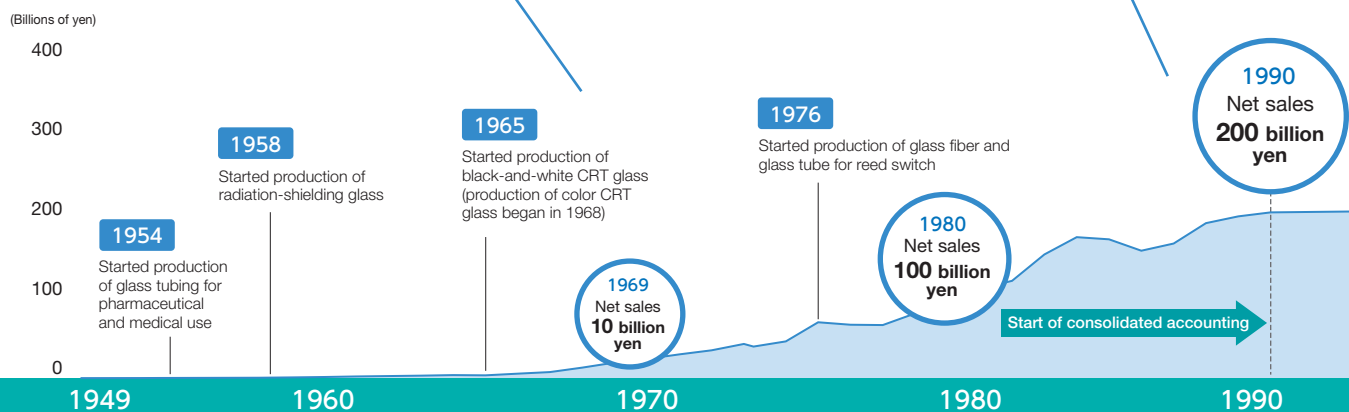
## History of Transformations and Advances

### 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.

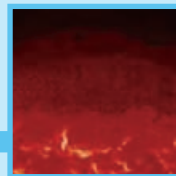


#### Technological Advances



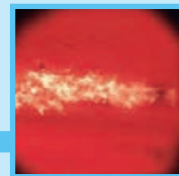
1951

Automated production of glass tubing using the Danner process



1974

All-electric melting furnaces with no fuel-derived CO<sub>2</sub> emissions brought online



1993

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

#### Sustainability Transitions

1960

Introduced a melting furnace with electric melting process

1974

All-electric melting furnaces with no fuel-derived CO<sub>2</sub> emissions brought online

1993

Japan's first oxy-fuel firing furnaces were introduced, resulting in a reduction of CO<sub>2</sub> emissions and improvement of heat efficiency

1998

Recycling system for glass collected from used televisions 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

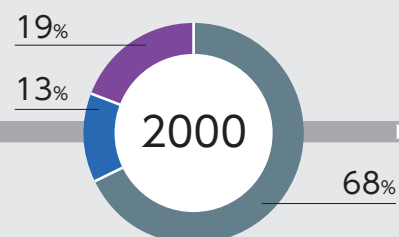
Electronic Products Group acquired ISO 9002 certification for three product classes including powder glass

1999

Acquired ISO 14001 certification for all plants in Japan

#### Changes in Business Composition

Legend:  
 ■ CRT  
 ■ Electronics and Information Technology (including FPDs)  
 ■ Performance Materials and Others

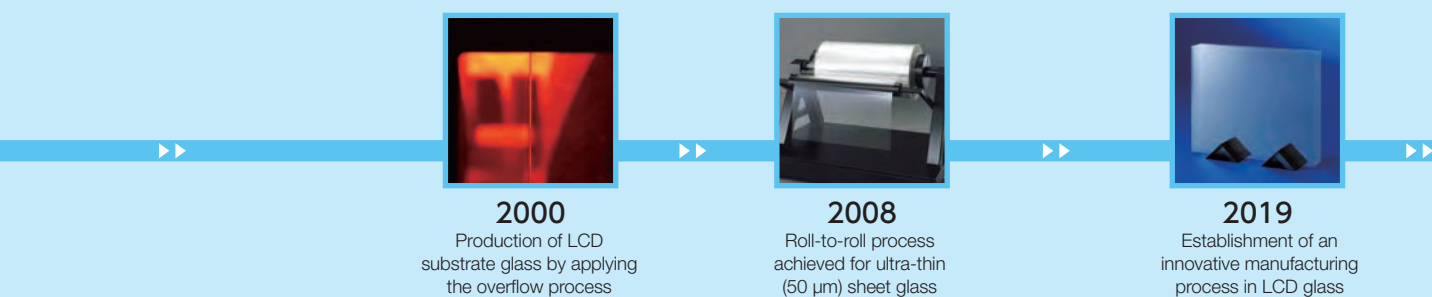
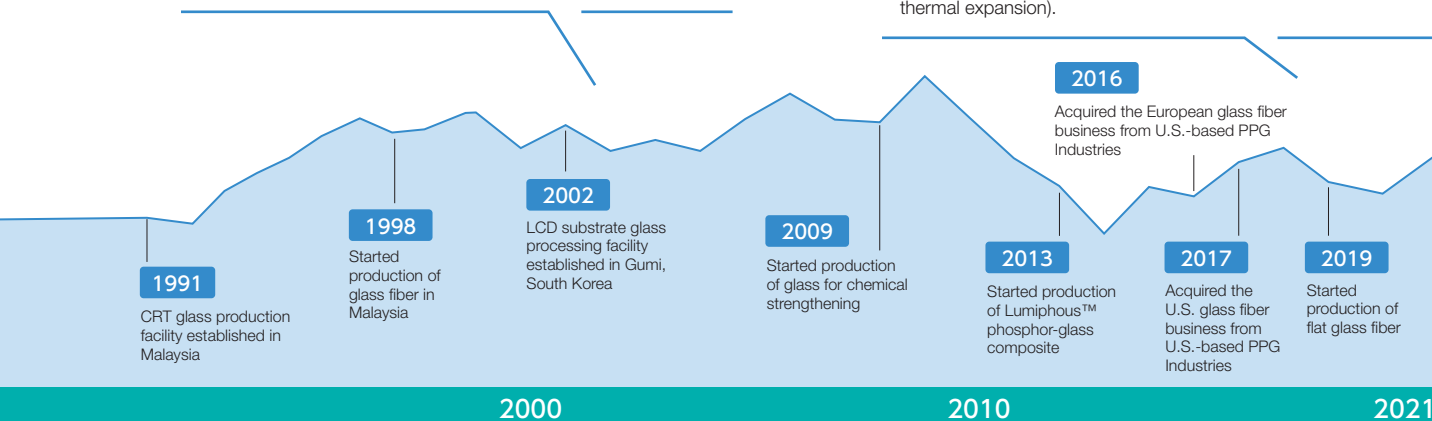


## The End of the CRT and changeover to LCDs

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).



### 2000

Implemented "Environmental Business Plan"

### 2006

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

### 2007

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

### 2010

Fuel conversion (complete discontinuance of use of heavy oil and switch to LPG/natural gas), resulting in huge reduction in CO<sub>2</sub> emissions

### 2011

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

### 2015

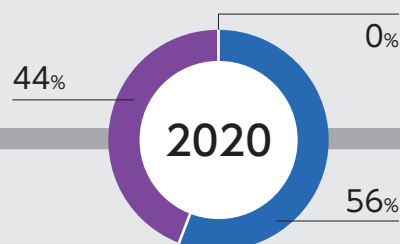
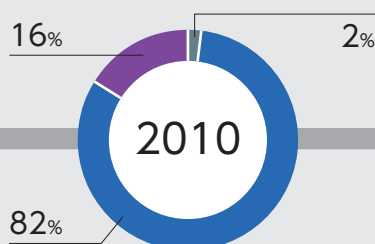
Participated in visiting lectures sponsored by Otsu City (ongoing)

### 2018

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

### 2019

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





## 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.

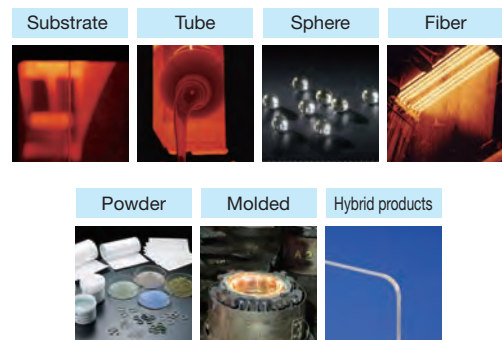
### Manufacturing Strength

#### 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 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 ICT and AI). 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 our Group 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.

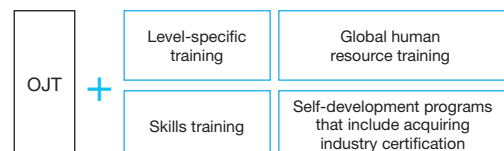
#### Human Resources and Organizational Structure

##### Responding rapidly with solutions for customers through organizational and employee competence

Since the Company's 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

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



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

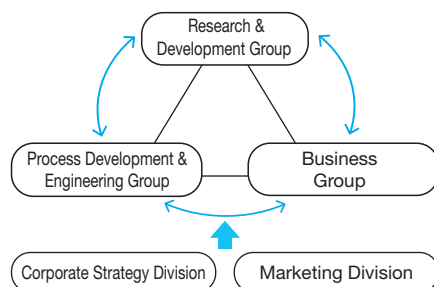
Ultra-thin  
substrate forming

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

Ultra-large substrate  
manufacturing

Crystallization

## Supporting Seed Technologies and Responding to Needs Organizationally



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 the Company's 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)

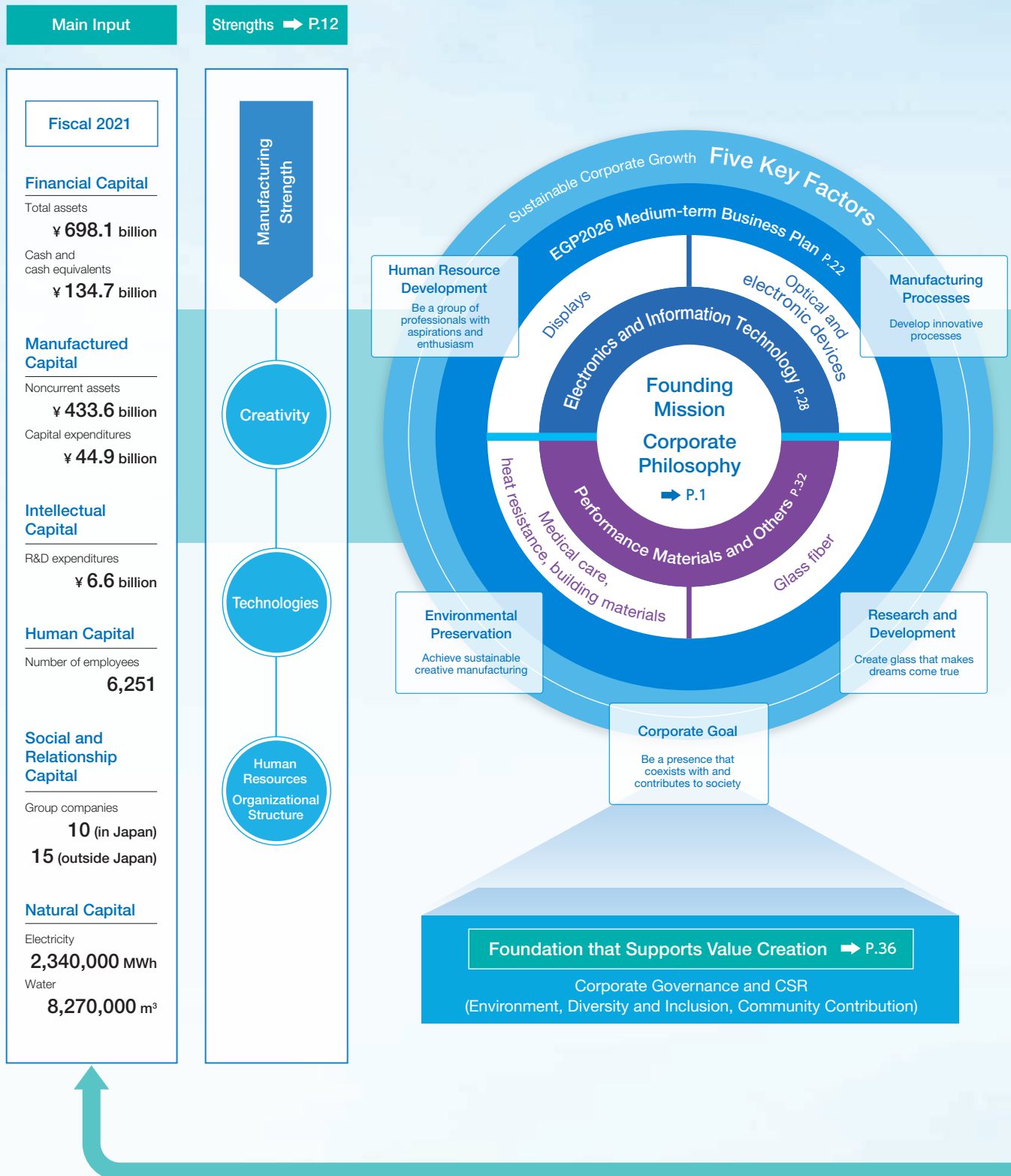


### Home Appliances and Housing Equipment

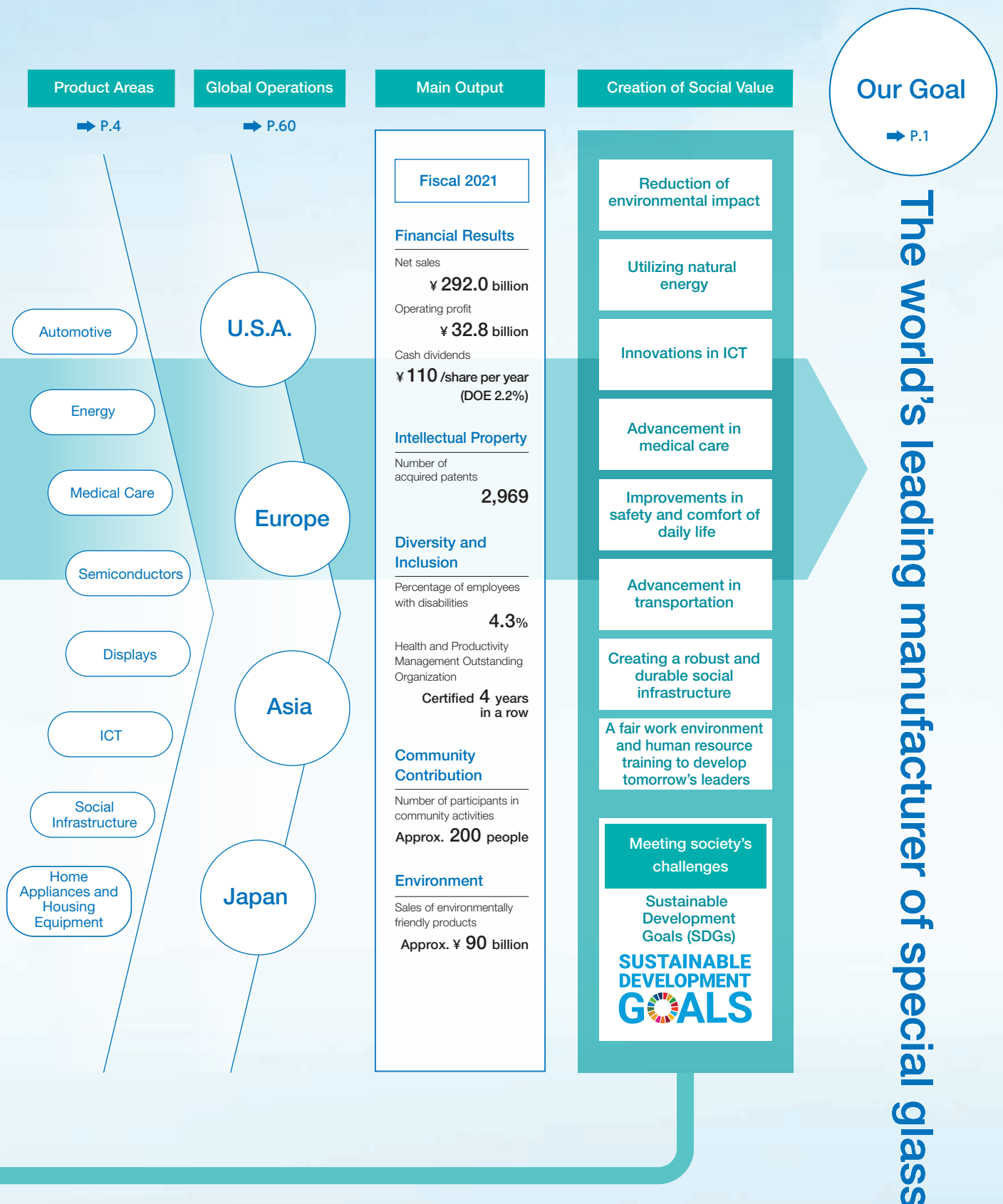
- High-function home appliances, housing materials
- Multifunction wall materials

## Value 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.

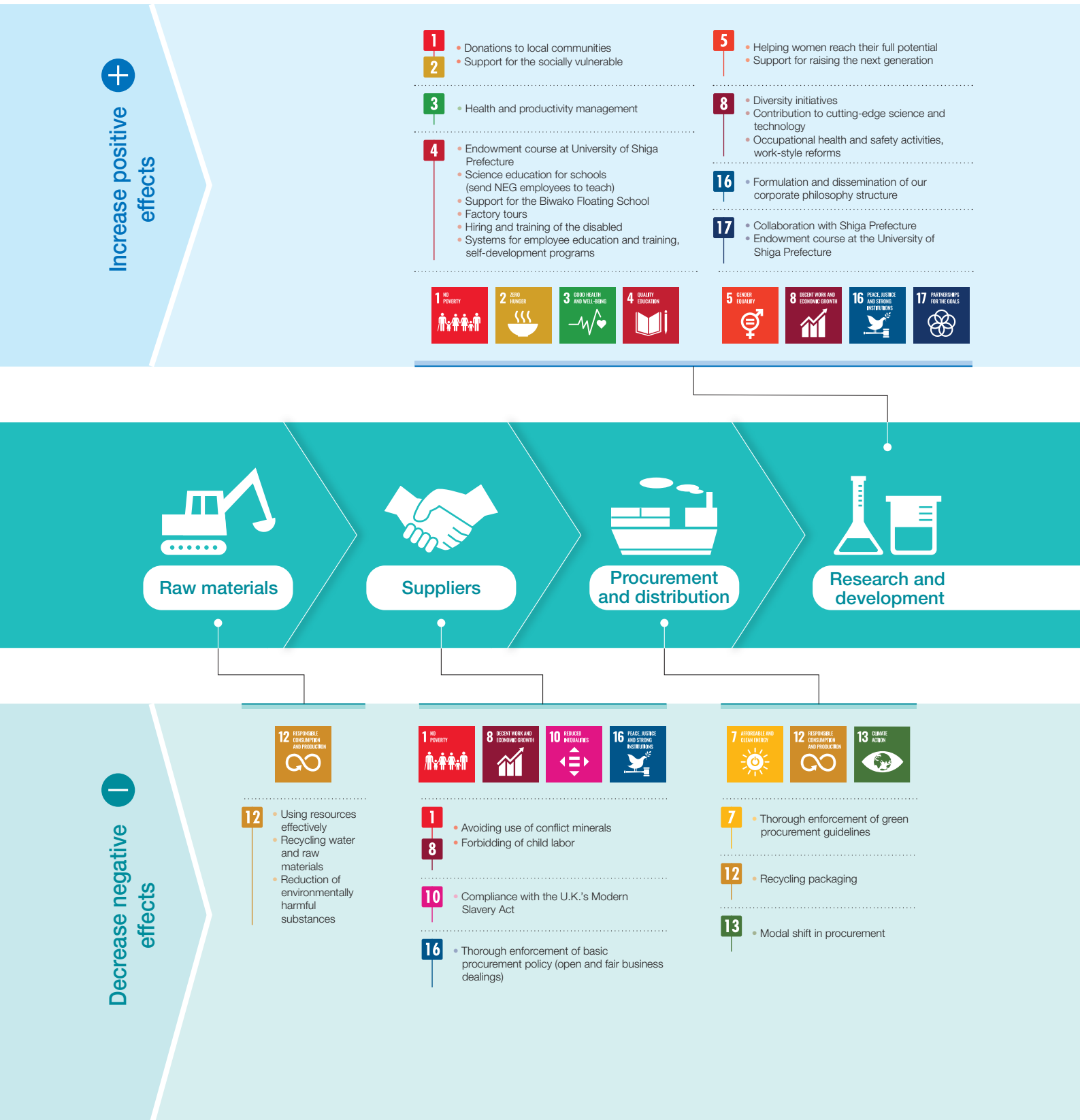






## Value Chain

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.



- 3**
- Glass tubing for pharmaceutical and medical use
  - Radiation-shielding glass for patient diagnosis
  - Flat-panel detector glass for X-ray diagnostic devices
  - Antimicrobial glass

- 9**
- ARG Fiber for reinforcement in construction
  - Development and sales of glass for optical communication and electronic devices

- 7**
- Resin-reinforced glass fiber to reduce the weight of automobiles
  - Resin-reinforced glass fiber for wind turbine blades
  - Glass substrates for FPDs, G-Leaf™ ultra-thin glass
  - Lamion™ lightweight composite material
  - Lumiphous™ phosphor-glass composite

- 11**
- Lamion™ for train station platform doors
  - FireLite™ fire-rated glass for fireproof public facilities
  - Glass fiber for reinforcement in construction
  - Glass fiber for resin railroad ties



Production



Sales



Product use



Final product disposal



- 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)

- 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 CO<sub>2</sub> 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

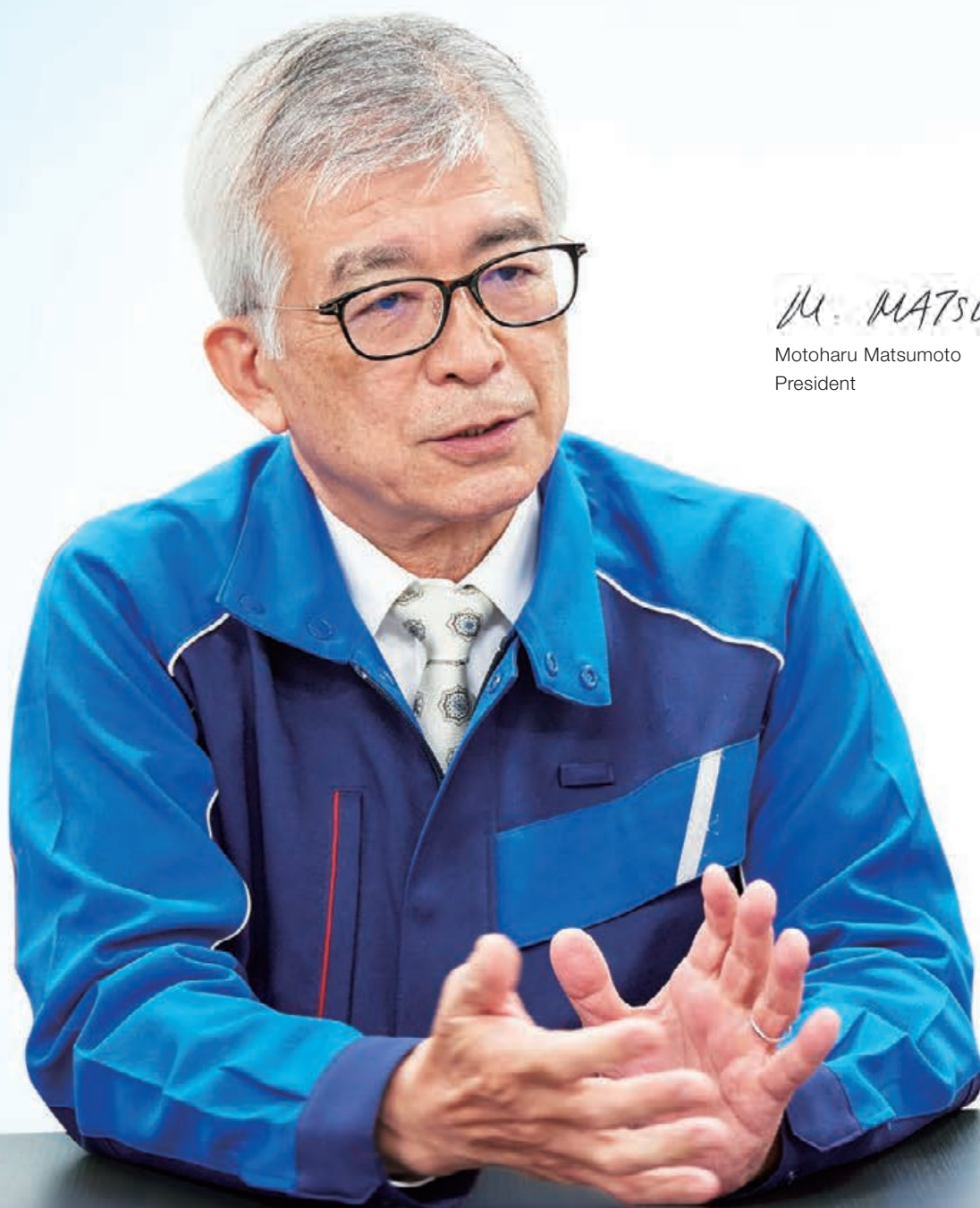


- 12**
- Recycling packaging
- 13**
- Modal shift in shipping
  - Joint shipping with customers (e.g., reciprocal utilization of trucks)



- 12**
- Reuse of waste glass

## Message from the President



*M. MATSUMOTO*

Motoharu Matsumoto  
President



## Under EGP2026, our new Medium-term Business Plan, we will expand the scale of our business.

### We achieved the goals of our EGP2021 plan in a rapidly changing business environment.

In fiscal 2021, the spread of the COVID-19 pandemic continued to have a negative impact on our corporate operations, but the benefits of the vaccination led to a gradual recovery in economic activity. On the other hand, this was a challenging year to navigate, as raw materials and components remained in short supply and the supply chain remained disrupted. Despite these circumstances, we managed to sustain our business operations in an effort to achieve our management goals as the final phase of EGP2021, our three-year Medium-term Business Plan. The spread of the COVID-19 pandemic led to the introduction of new ways of working internally as well as outside the Company. This new environment prompted us to work more closely with our customers, respond in a detailed manner to customer requests, and always offer solutions one step ahead of the competition. In addition, we worked to multiply the benefits of the technological innovations we have long been implementing in our manufacturing operations.

As a result, we were able to achieve results in fiscal 2021 that exceeded those of the preceding fiscal year while absorbing cost increases from soaring raw materials and fuel costs and logistics rates. Sales grew along with increased shipments of our flagship glass products for flat panel displays and glass fiber products as well as strong and stable shipments of glass for electronic components and for medical care, and heat-resistant glass. Operating profit, ordinary profit, and profit attributable to owners of the parent company all recorded significant increases compared to the previous year.

In the final year of our EGP2021 plan, we attained our sales objectives while exceeding our targets in terms of both operating profit and operating profit ratio. Notably, our operating profit ratio was 11.2%, which exceeded the 10% that we consider necessary for investment to support sustainable growth. We have thus been able to establish a base that allows for a smooth launch of EGP2026, our new Medium-term Business Plan.

### Continuing to grow our business under EGP2026

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EGP2018, our first Medium-term Business Plan introduced in 2015, saw us expand our Performance Materials and Others sector in an effort to improve our business portfolio. For our EGP2021 plan, we focused on strengthening our business foundation while promoting innovations in process technology, which put our Company on a stronger footing. Looking ahead to our EGP2026 plan, we intend to use this sturdy foundation as a springboard to expand our business.

Our slogan for both our EGP2021 and EGP2026 plans is “Strong Growth,” which expresses our intentions quite clearly. We are emphasizing stronger R&D and human resource development, vigorous factories, and a robust supply chain. We intend to make our Company resistant to the more volatile business environment that is likely to appear in the future.

For our EGP2026 plan, we have made an adjustment from our previous three-year plan to the current five-year plan, which

represents a noteworthy shift. The glass industry utilizes fairly large-scale facilities, and the transition from the planning to operation phases often exceeds two years. We have come to realize that this process cannot be measured adequately in three years. Moreover, the R&D process from inspiration to commercialization also takes a considerable period of time, while long-term planning is required to provide appropriate training and assignment of our human resources. We have therefore extended our business plans to a five-year term in order to incorporate all these elements into our medium-term business plans with greater specificity. We can also characterize our EGP2026 plan by the fact that we have backcasted every business from our vision of their desired state five years from now in order to identify the issues that need to be addressed in fiscal 2022.

### Targeting record sales in fiscal 2026

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For the final year of our EGP2026 plan, we adopted a sales target of 400 billion yen. In fiscal 2010, the Company posted record sales of 390 billion yen, but our new target exceeds even that. Our target for operating profit was set at 45 billion yen on the assumption that we intend to maintain a minimum operating profit ratio of 10% even if our sales grow. All the markets we are involved in are expected to grow at a stable rate. Looking to our display business, it is clear that all areas of society are increasing their use of flat panel displays. As one example, demand for automotive displays is steadily increasing with the increased adoption of electric vehicles.

As evidenced by the display business and the policies encompassed by our EGP2026 plan, we believe that the display business has much growth potential, as do our other markets including the glass fiber business; the optical and electronic device business; and the medical, heat-resistant, and building materials businesses. We are responding to this prospective growth by incorporating investments up to two years in advance. Looking to our targets three to five years ahead, we intend to reflect the results of this fiscal year and the next into these future investments.

### Building a robust supply chain

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We have identified five priority measures under our EGP2026 plan, including strengthening our business platform, making flexible investments, promoting new businesses, promoting carbon neutrality initiatives, and executing our human resources strategy. All these measures are essential for achieving sustainable growth; consequently, we are communicating these priorities to our investors and other stakeholders as we address them in a comprehensive manner within the Company.

With regard to our first priority measure, strengthening our business platform, our first step was to establish a robust supply chain. Against the backdrop of challenging economic conditions, disruptions in logistics, and labor shortages, it has become difficult to secure the needed equipment, materials, fuel, packaging materials, and even personnel. We intend to address these needs in a steadfast manner by predicting procurement risks, securing stable suppliers, and establishing multiple logistics routes.

In addition, as for our effort to create robust factories, it appears that conventional initiatives are insufficient in light of the increasing sophistication of processes and the intensification of climate change. Consequently, we will focus on establishing a system that enables prompt recovery in the event of an emergency

by providing ongoing education and training while developing backup systems. The need to update aging equipment is also a critical issue, and we intend to proactively meet our needs five or even ten years in advance as part of this upgrade cycle.

## Seeking to improve competitiveness while promoting carbon neutrality

Our second priority measure is making flexible investments. Although many of the investment plans we have marked for implementation in the current and next fiscal year are already in progress, we will remain adaptable to change regarding the decisions to be made in the third fiscal year and beyond. We will make capital investments in a timely manner by determining whether we can remain competitive in a particular business and process, whether the local interests are served, and whether geopolitical risks are present.

Looking to our third priority measure, promoting new businesses, we are placing a special focus on the development of an all-solid-state sodium-ion secondary battery. This battery does not incorporate the rare metal lithium, so it entails less risk in terms of material procurement, while its inorganic oxide composition means that it cannot ignite and generate toxic gases. In addition, its excellent cycle characteristics offers several advantages, including resistance to deterioration. The key to the future of this product is the provision of high energy density. We remain focused on further development of this innovation with the goal of commercializing it during the term of our EGP2026 plan.

With regard to our fourth priority measure, promoting carbon neutrality initiatives, we developed a concrete plan last year and formulated a schedule extending until 2030. By that date, we anticipate having reduced our CO<sub>2</sub> emissions (Scope 1 + 2) by 36% relative to 2018 and by 60% for emissions intensity (Scope 1 + 2). Thereafter, we will continue to implement our plan in a steadfast manner. We believe that our improved competitiveness will enable us to prevail over our global competitors.

We should remember that it is individuals who must implement these priority measures. Our fifth priority measure is to execute our human resource strategy, which is to hire diverse personnel with the knowledge and skills required for future business development, to create a workplace environment in which employees can work with complete peace of mind, and to continue training our personnel.

As mentioned, we intend to achieve sustainable growth and carbon neutrality through flexible investment and through the

development of new businesses even as we strengthen our business foundation over the next five years.

In recent years, our shareholder composition has changed, and a wider range of individuals hold our shares. While I am thankful for the spreading support for management and am personally very grateful as a management executive, I once again feel the weight of responsibility for shareholder returns even as we fulfil the desire to continuously grow our business. In keeping with our policy of maintaining a stable dividend, we have not reduced our dividend for the preceding 20 years, and we have either increased our dividend or kept it unchanged each fiscal year. Going forward, we remain committed to maintaining a minimum dividend on equity ratio of 2% while enhancing shareholder returns through the flexible acquisition of treasury stock.

We look forward to your continued support as we pursue these endeavors.



# New Medium-term Business Plan “EGP2026”

Slogan

## “Strong Growth”

Completing all work by changing ourselves and speeding up

### Basic policy

We aim to become the world’s leading manufacturer of special glass by strengthening our corporate structure and manufacturing the world’s most environmentally friendly glass.

### Period

January 1, 2022, to December 31, 2026 (5 years)

### Management targets

Net sales:

**400** billion yen

Electronics and Information Technology

**210** billion yen

Display glass, optical and electronic devices, and related products

Performance Materials and Others

**190** billion yen

Glass fiber, medical care, heat resistance, and building materials

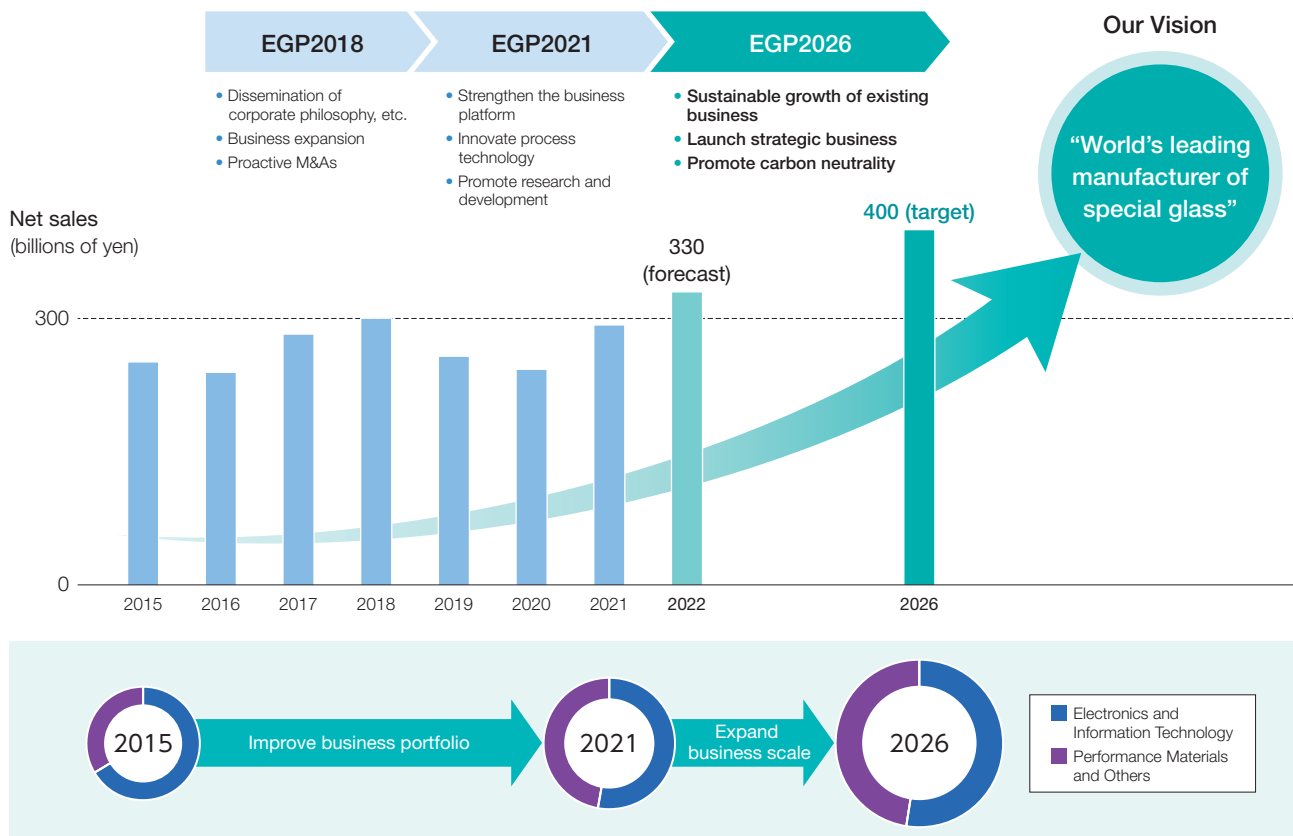
Operating profit: **45** billion yen

Operating margin: **11** %

Target year: **Fiscal 2026**

We are steadily implementing strategies for growth to achieve our targets in each business field.

Note: For our strategies and growth prospects for each field, see “Business Overview” on pages 28–35.





## Priorities Measures for Growth

### 1 Strengthen the business platform

- **Establishing a robust supply chain**  
In order to respond to procurement risks arising from economic conditions and disruptions to logistics, as well as environmental and compliance risks, we will seek out multiple capable suppliers and logistics routes and monitor our business partners.
- **Reinforcement of plants**  
To establish plants that are resistant to disasters and malfunctions, we will introduce advanced and highly efficient equipment and reinforce our backup systems.
- **Continuing basic research and development**  
We will undertake research on materials and process development utilizing computational science; construct networks and engage in joint research with universities and research institutes inside and outside Japan; introduce facilities for those purposes; hire personnel from inside and outside Japan; and expand our networks.

### 2 Flexible investment

- **Investing with agility in response to market growth and customer needs**
- **Promoting the digital transformation and realizing of smart factories**  
Using digital technologies such as AI and IoT, we will promote timely collection and analysis of manufacturing process data; promote process automation to improve productivity, reduce human errors, and reduce the burden on employees.
- **Proactively pursuing M&A**  
In addition to pursuing organic growth, we will proactively pursue M&A with businesses that are expected to create synergies with our existing businesses without any delay.

### 3 Promote new businesses

- **Commercialization of new products such as all-solid-state sodium-ion secondary batteries**  
For information on the development of all-solid-state sodium-ion secondary batteries, see "Special Feature: Developing an All-solid-state Sodium-ion Secondary Battery" on pages 26–27.
- **Expanding our substrate glass, cover glass, and LTCC material businesses in the semiconductor field**
- **Proactively using of cooperation and alliances with other companies**

### 4 Promote carbon neutrality

- **Balancing the electrification of all our processes while improving our competitiveness**  
By electrifying all processes and updating our equipment, we will improve our competitiveness while helping to minimize global warming.
- **Investing in and procuring renewable energy**
- **Developing technologies for hydrogen energy and other carbon-free energy sources**  
Our initiatives to achieve CO<sub>2</sub> emissions reduction targets and carbon neutrality are presented in "Special Feature: Our Initiatives for Carbon Neutrality" on pages 50–51.

### 5 Human resource strategy

- **Recruiting and training personnel with advanced knowledge and skills**  
We will proactively seek to acquire specialized personnel from a long-term perspective while improving our fundamental technology, product development technology, and process development technology.
- **Encouraging diversity in our human resources hiring and promotions**  
We will create a work environment that welcomes women, foreign nationals, members of the LGBTQ community, and people with disabilities. We will improve our human resources development programs in order to acquire a broad range of personnel with the diverse values required for business growth.
- **Creating comfortable and motivating workplaces**  
We will improve work efficiency through work style reforms, reduce the burden on our employees, create a pleasant workplace that enables our diverse personnel to derive satisfaction from their work, utilize RPA and other IT tools, and expand our telework and flextime systems.

## Financial Policy, Profit Distribution Policy

#### Financial policy

- Achieving an operating margin exceeding 10%
- Maintaining a strong balance sheet
- Improving the efficiency of asset use by streamlining total assets
- Managing from the perspective of cash flows

#### Profit distribution policy

- Maintaining stable payment of dividends [maintaining a minimum dividend-on-equity ratio (DOE) of 2%]
- Growing the dividends according to business performance, financial conditions, etc.
- Adopting a flexible approach to acquisition of treasury shares

## 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.

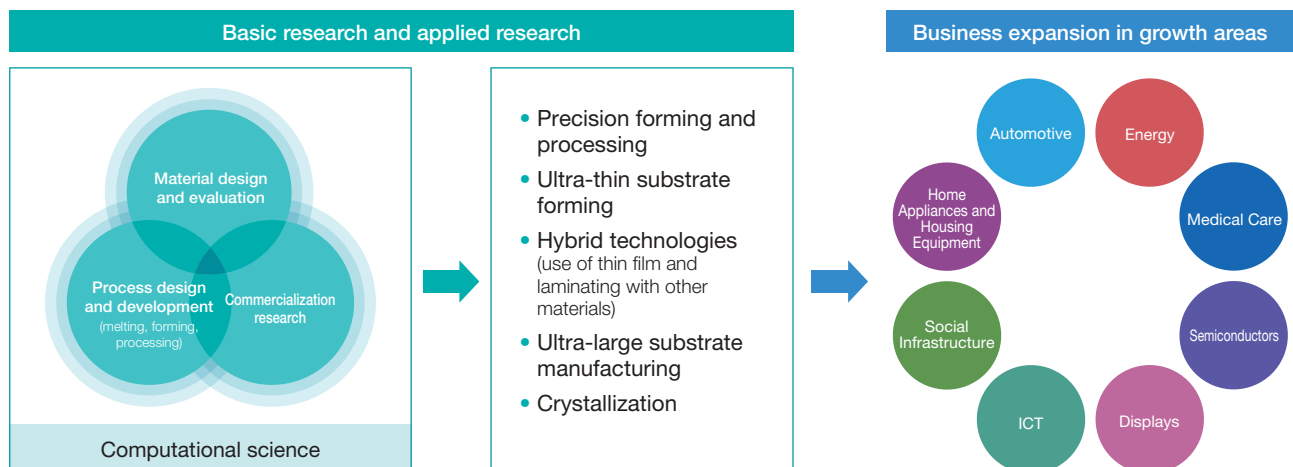
#### R&D Policy

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 ICT and 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 CO<sub>2</sub>-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

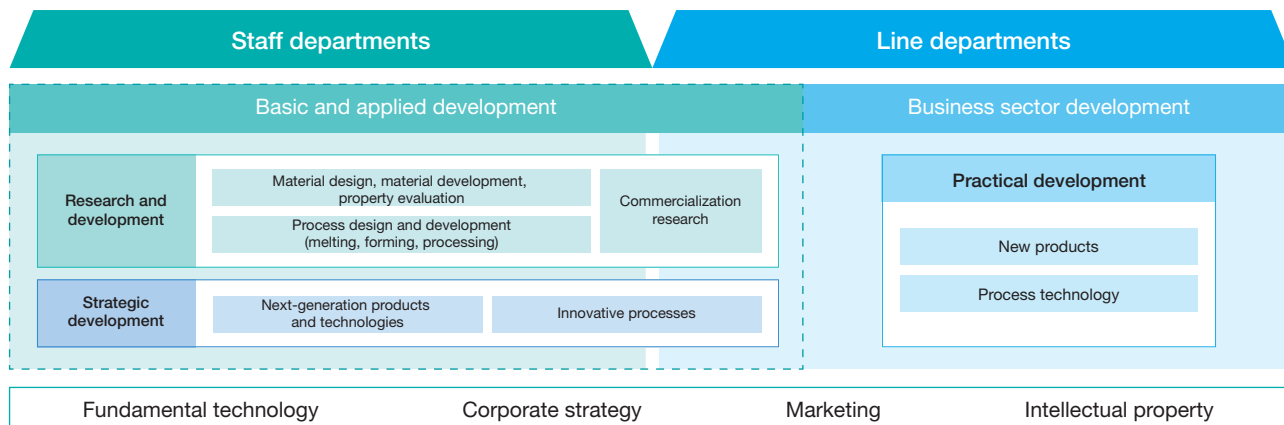
Our Research & Development Group and the Process Development & Engineering Group, as staff departments, engage in R&D in the areas of material design and development, property evaluation, and process design and development. Meanwhile, our line departments carry out practical development such as product 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, we have established our Marketing Division to collect and analyze information related to markets, products, and technologies; promote our products and technologies; and disseminate information as a means of acquiring customers.

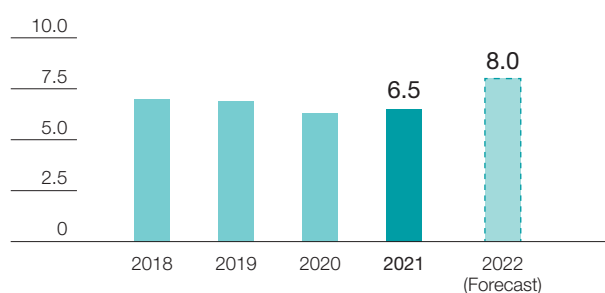
## Collaboration between Departments



## 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 6.5 billion yen in fiscal 2021. We will continue boosting our R&D activities.

R&D Expenditure (Billions of yen)



## Intellectual Property

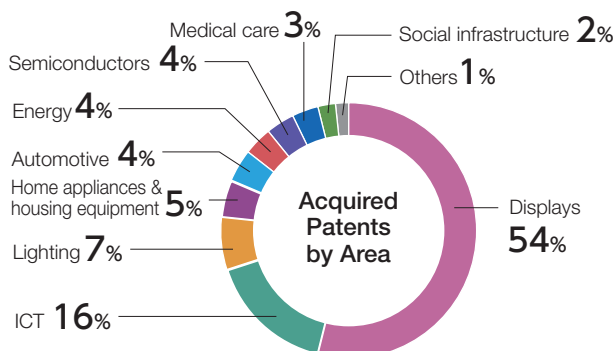
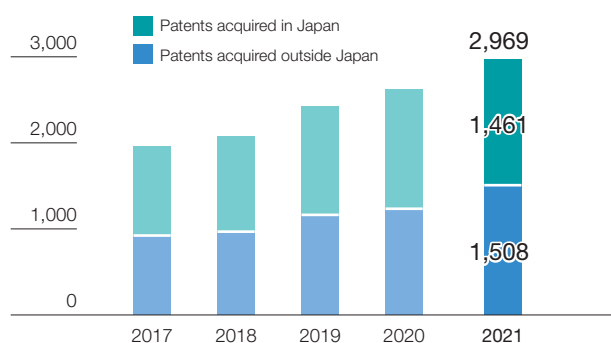
The intellectual property initiative we have developed incorporates a policy intended to provide a competitive advantage and contribute to corporate development. It achieves this by promoting glass manufacturing, research and development of glass products and processes, and the construction of an integrated system incorporating all these aspects. The objective is to protect and implement the technological advantages thus generated as intellectual property.

In order to become the world's leading manufacturer of special glass, it is essential that we leapfrog our competitors by

developing new functional materials and products and imbue them with greater performance through highly efficient processes. As a means of protecting and applying these new technologies as intellectual property while discouraging competitors from infringing on our rights, we are taking timely steps to acquire patents with a broad scope of claim in order to discourage potential violations of our intellectual property.

Through these efforts, we are expanding and strengthening our effective patent network while tailoring it to the territories and scope of business we are targeting.

Number of Acquired Patents



## Special Feature

### » Product

# Developing an All-solid-state Sodium-ion Secondary Battery:

Contributing to the Emergence of a Society Committed to Sustainability

Development Division,  
Research & Development Group  
**Kei Tsunoda**

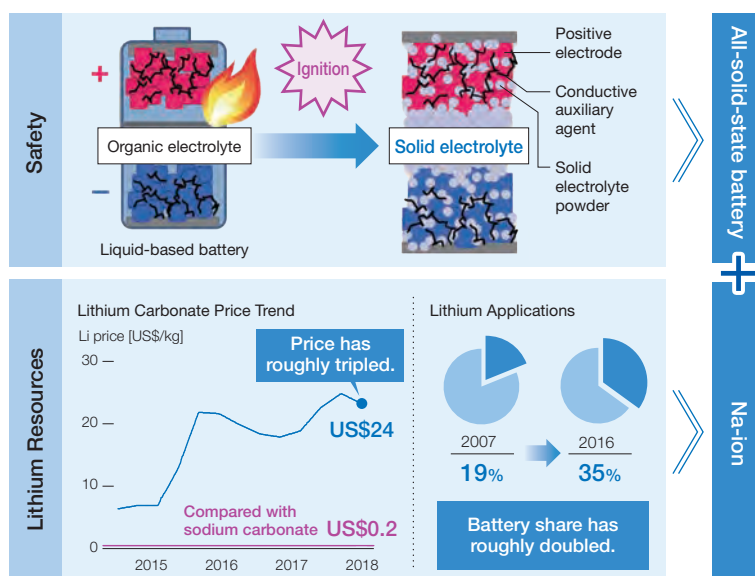
Development Division,  
Research & Development Group  
**Hideo Yamauchi**

## Development Background

The lithium-ion (Li-ion) secondary (rechargeable) batteries currently on the market have two major disadvantages. The first is safety; because Li-ion secondary batteries incorporate a flammable organic solvent as the electrolyte, a risk of ignition exists from thermal runaway during fast charging.

The other disadvantage is the issue of access to resources; currently, the demand for Li-ion secondary batteries has been increasing as many economies seek to decarbonize and conserve energy in an effort to address global warming. As a result, lithium, a rare metal, is in short supply as a raw material and prices have soared.

To address these two problems simultaneously, we undertook development of an all-solid-state sodium-ion (Na-ion) secondary battery. We have designed this battery with a non-flammable solid electrolyte incorporating sodium ions as the carrier ions, a formulation that entails no resource risk.



## Advantages of the All-solid-state Na-ion Secondary Battery

The main advantage of this innovative battery is that the main components of the battery — the positive electrode, electrolyte, and negative electrode — consist entirely of inorganic oxides. Oxide-based batteries have excellent thermal stability, which provides a significant advantage in battery safety. However, a major problem arises when integrating active materials such as positive electrodes and negative electrodes with solid electrolytes. It is very difficult to integrate hard inorganic oxides, and it is not possible to form a good ion conduction path. As a result, the interfacial resistance inside the battery increases, making it difficult to demonstrate the expected advantages of an all-solid-state battery, such as operation below room temperature and rapid charge/discharge characteristics.

Therefore, sulfide-based batteries that can be integrated by applying pressure to relatively soft materials were developed early on. However, we have succeeded in demonstrating the industry's first an all-oxide all-solid-state Na-ion secondary battery that functions at room temperature.\* We achieved this by employing our glass-ceramic technology to integrate active materials and solid electrolytes, a task previously considered difficult. This battery is quite safe and presents no risk of ignition or generation of harmful gasses even if pierced with a nail or blade or the like.

Moreover, its output voltage of 3 volts is comparable to that of current Li-ion secondary batteries, thus making it suitable for use with a variety of devices.

Another advantage is its composition: as it comprises only abundant materials such as sodium and iron, it requires no rare metals or rare earths such as lithium or cobalt. As well, it can use lightweight and inexpensive aluminum as a negative electrode current collector, something not possible with current Li-ion secondary batteries.

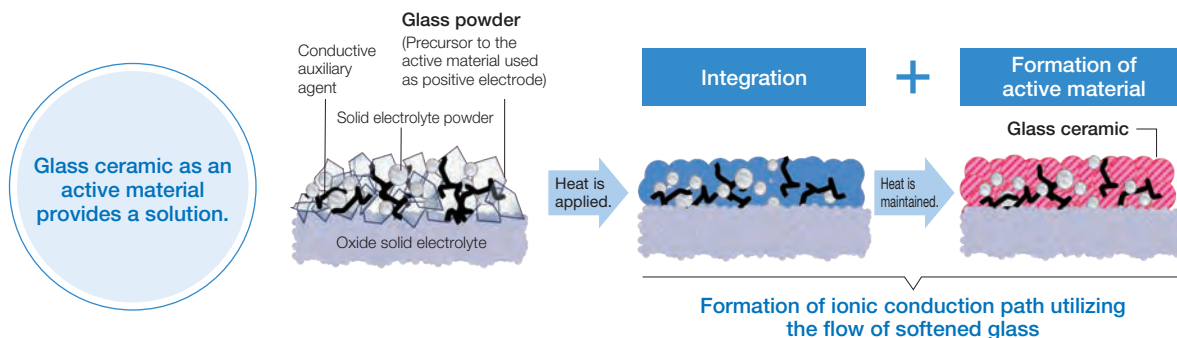
\* Please refer to our press release of November 18, 2021.



## ▶ Glass-ceramic Technology Enables the Integration of Electrolytes and Active Materials

When heated, glass exhibits decreased viscosity and demonstrates a softening flow behavior peculiar to glass. Thanks to this characteristic and the airtightness inherent in glass, glass is useful for sealing and bonding electronic components. When the temperature is increased further, crystallization occurs in which the crystal structure of the atoms is rearranged into a more stable crystal structure as an energy state.

By utilizing the properties of our special glass, we have succeeded in integrating an active material with a solid electrolyte.



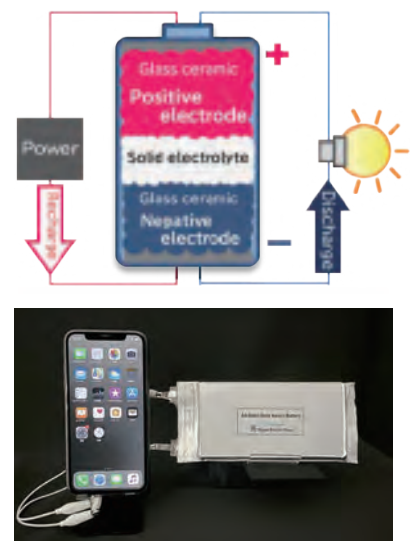
## ▶ The Formula for Reducing Internal Resistance: $V=E-rl$

The mathematical expression shown above represents the relationship between the electromotive force of the battery and its internal resistance. For a battery with an electromotive force  $E$ , if the internal resistance  $r$  of the battery is high, the real voltage  $V$  will decrease by the amount  $rl$  multiplied by the current  $I$ . Reducing internal resistance is the most important factor in improving battery performance.

In 2017, we became **the first in the industry** to demonstrate the use of all-solid-state Na-ion secondary battery **at room temperature** incorporating glass ceramic as the positive electrode. **We have devised a proprietary method** of precipitating glass-ceramic powder on a solid electrolyte and firing and integrating the glass powder so that it functions as a positive electrode. An oxide ceramic called beta-alumina is used as the solid electrolyte. Beta-alumina has good sodium ion conductivity and is equivalent to conventional organic electrolytes. This achievement was very well received: in addition to receiving the Technical Encouragement Award from the Ceramic Society of Japan, an associated paper submitted to the American Ceramic Society became the No. 1 most downloaded paper of that year.

**In 2019, we were able to further reduce the internal resistance of the battery and confirm that this battery could operate successfully even at a temperature as low as -20°C.** This achievement earned high praise, and the associated paper published under Scientific Reports in the UK scientific journal *Nature* was downloaded more than 6,000 times in one year, becoming the third most downloaded paper of the year. We also improved the interface contact between the components in order to increase the exchange of sodium ions between the glass ceramic used for the positive electrode and the solid electrolyte. This reduced the interface resistance between the positive electrode and the solid electrolyte, which allowed more electricity to flow.

Recently, by developing a new glass ceramic as a negative electrode to replace the dangerous metal sodium, **we were able to develop a battery incorporating only inorganic oxide components** while achieving room-temperature operation.



## ▶ Envisioning Practical Applications

One of our top priorities is to continue our current research on ways to improve the energy density, cycle characteristics, and rapid charge/discharge characteristics required of these batteries in all applications.

We believe that our all-solid-state Na-ion secondary battery will make an indispensable contribution to the emergence of a sustainable society in the future. As special glass professionals, we are focused on developing innovative materials, but in order to commercialize and create a market for this device in the future, we must strengthen cooperation with our partners sharing the same objectives. We remain dedicated to further improving the performance of this battery and are actively cooperating with research institutes and other companies with a view to eventual commercialization.

## Business Overview

### Electronics and Information Technology

#### Display-related Business



We aim to further enhance  
our competitiveness through  
technological innovation.

Director and Senior Vice President,  
Group General Manager of 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 used in liquid crystal display (LCD) and organic electroluminescence (EL) televisions, 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 a 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 a cover glass for smartphones, tablets, in-vehicle displays, and other applications. It protects screens from scratches and impacts. We also manufacture Dinorex UTG™ ultra-thin glass that can be used for foldable devices.

## The Business Environment

The display market expanded significantly in 2021 due to increased telecommuting and a trend toward staying at home during the continuing COVID-19 pandemic. Display-related products are also expected to show steady growth in 2022 during the on-going shift to a new lifestyle that makes use of digital technologies. In the panel industry, the production capacity of organic light-emitting diodes (OLEDs) and liquid crystal displays (LCDs) is expected to increase, mainly in China.

## Our Strengths

We use the overflow process to manufacture glass for flat panel displays (FPDs), as well as 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. We will build new manufacturing facilities for 10.5-generation glass in Xiamen, China in the first

half of fiscal 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) that is flexible enough to be bent like a film, so 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.

We will also expand the innovative manufacturing process technologies that we have developed to other products, which will improve productivity, reduce energy consumption, and reduce CO<sub>2</sub> emissions. This way, we intend to enhance our competitiveness in terms of cost and quality, as well as to contribute to achieving carbon neutrality. We are proud to have earned the trust of our customers by always responding with sincerity to their requests through our sales skills and technological development capabilities.



## Corporate Strategies

- Enhancing our competitiveness by expanding our innovative manufacturing process to other products and promoting carbon neutrality
- Expanding production and sales in the booming Chinese market, and growing market share
- Expanding sales of ultra-thin glass as a cover glass for foldable devices
- Promoting the development of new products other than displays by applying our overflow technology to various other glass materials

## Business Overview

In fiscal 2021, the production facilities for FPD glass in our domestic plant were shut down due to power failures that occurred in December 2020, but we were able to restore them during the first quarter of fiscal 2021 (January to March 2021), and other bases also enhanced their productivity steadily throughout the year. This enabled us to absorb the startup cost of the third investment in Xiamen, China. In terms of sales, continued strong demand triggered the full-scale sales of 10.5-generation glass, resulting in shipments exceeding those of the previous fiscal year.

The shipments of glass for chemical strengthening declined due to the sluggish demand for smartphones and other devices.

## New Medium-term Business Plan EGP2026

The most important issue of EGP2026 is to expand our market share by enhancing our advantage against our competitors. For that purpose, we will aim at carbon neutrality, improve quality, and reduce costs by expanding our innovative manufacturing process in this business. In fiscal 2022, the first year of EGP2026, we will construct facilities for immediate production capability through the third investment (for melting and forming) and fourth investment (for processing) in Xiamen, China. The demand for large-sized glass is expected to continue growing in

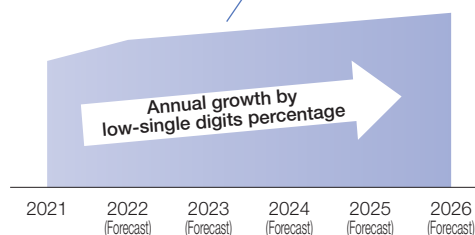
China. By making good use of the capabilities of each base in China (mainly in Xiamen), we intend to strengthen their presence in the Chinese market.

Moreover, we will need to make our workplaces robust against disasters and problems. By learning from the significant damage caused by the power failure accident mentioned earlier, we will renew facilities, expand backup facilities, prepare a business continuity plan (BCP), and make other necessary preparations in terms of hardware and software.

In the display market, devices based on new technologies are expected to emerge one after another. We will apply our overflow technology to the quality expected for such new type displays, and capture new demand.

### Outlook of Demand for FPD Glass (Area Basis, Estimated by the Company)

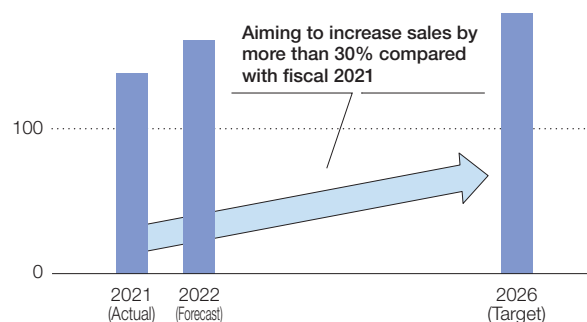
The market is expected to grow steadily from 2022 onward.



### Growth Image of FPD Glass Business (Sales)

(Billions of yen)

Aiming to expand market share mainly in the Chinese market



## Electronics and Information Technology

### Optical and Electronic Device-related Business



We will promote early commercialization of new products and strengthening of marketing.

Senior Vice President  
Group General Manager of 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; precision glass tubes; and phosphor-glass composite for LED lighting (Lumiphous™).

## The Business Environment

### Glass for optical devices

In 2021, the market slumped because investments in the communication infrastructure in China slowed down. However, an increase in demand for high-speed communication, such as 5G, is expected to expand the installations of base stations and data centers on a medium-to-long-term basis. Moreover, trunk line systems such as submarine cables and access networks in North America are undergoing steady improvement.

### 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. Applications of glass in 5G communication, healthcare, and other business fields are continuously expanding and the functions expected from glass are also becoming more sophisticated.

## Our Strengths

We engage in wide-ranging in-house efforts focused on material development, product development, and process development, which enables us to surpass our competitors in terms of speedy and quality industrialization and commercialization. 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 have earned high praise from customers in terms of our quality and stability of supply. Our strong relationships of trust with our customers and our high brand equity in the marketplace lead us to a high market share.

## Corporate Strategies

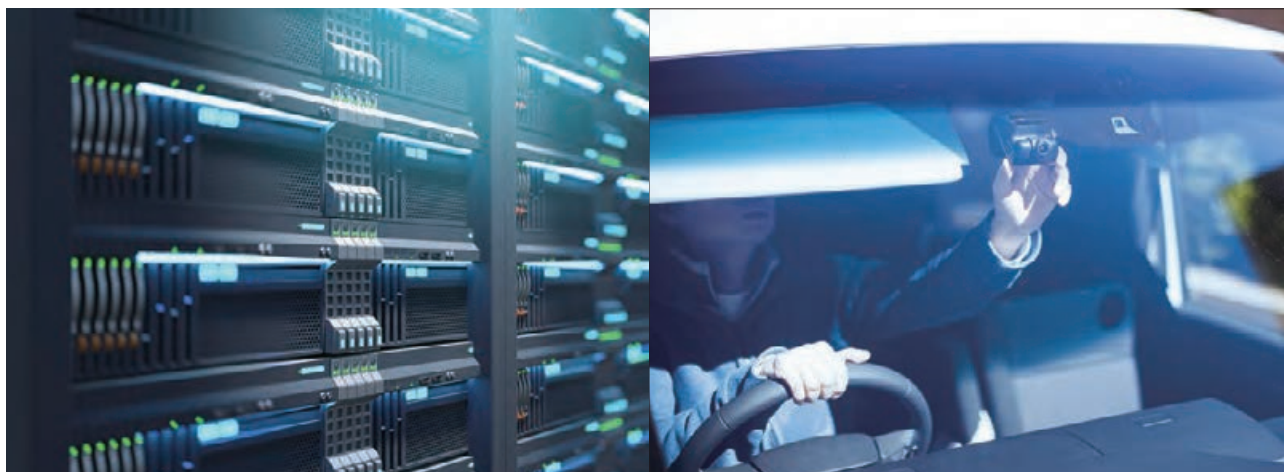
- Establishing a supply system that meets market needs by timely investments in promising growth areas
- Finding new customers and expanding sales by strengthening collaboration with our Marketing Department
- Promoting product development and commercialization by strengthening internal and external collaboration

## Business Overview

With regard to glass for optical devices, in fiscal 2021, the market slowed down and our shipments declined. With regard to glass for electronic devices, on the other hand, our products related to electronic components and semiconductors that are used for home appliances, digital cameras, automobiles, and other devices sold well following the economic recovery from the COVID-19 pandemic.

We have been commercializing products that cope with rapid changes in social infrastructure. New products that we have developed include materials for optical devices expected for use with deep-ultraviolet LED for medical use, LD for 5G optical communication, aerospace sensors and other devices, and materials for low-loss LTCC suitable for 5G communication.





Materials for low-loss LTCC

## New Medium-term Business Plan EGP2026

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 share thanks to growing social needs.

In such market environments, we aim to increase sales and profits by expanding the sales of existing products and commercializing new products early under EGP2026.

For our existing products, we will improve their quality, enhance their characteristics, and reduce their costs to establish a supply system that meets market needs. In particular, we will invest in promising growth areas, such as semiconductor, automotive, and healthcare-related sectors, in a timely manner.

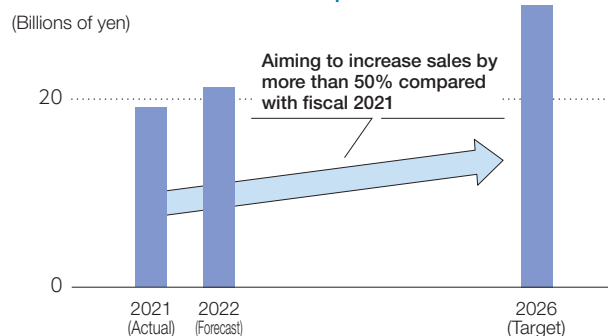
We also intend to expand our customer base by taking advantage of our trust relationship with customers to obtain new opportunities early and lead them to development and commercialization, as well as by strengthening promotion utilizing market analyses, exhibitions, and websites in collaboration with our Marketing Department.

As for development, we aim to expand our businesses in the next five years by proceeding with commercialization of new products including infrared transmitting glass, glass for augmented reality (AR) and mixed reality (MR), and glass

substrates used in the semiconductor manufacturing process. We continue to strengthen internal and external collaboration, as well as to actively collect information so as not to miss out any chance of mergers and acquisitions (M&A).

### Growth Image of Optical and Electronic Device Business (Sales)

Continuing to strengthen marketing and commercialize new products



Glass substrate for probe card for semiconductor inspection

## Performance Materials and Others

### Glass Fiber- related Business



We will further advance  
environmental considerations  
and globally provide  
products that contribute to a  
decarbonized society.

Senior Vice President  
Group General Manager of Glass Fiber Group

**Norio Nakamura**

## Main Products

### 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 and housing equipment. 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. Glassfiber 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. In addition, GRC is used to repair and reinforce waterways and bridge piers, as well as to prevent tunnel walls from falling off. It is also used for utility poles and for other purposes.

## The Business Environment

The demand for automobile parts applications, which account for the majority of our glass fiber sales, drastically declined due to the COVID-19 pandemic in 2020. However, the tide turned and, following the recovery of economic activities, strong demand continued throughout the year 2021. As environmental awareness increases, the major shift from internal combustion engine vehicles to electric vehicles (EVs) and eco-friendly vehicles is occurring. Moreover, in response to the demand for improved fuel economy, automobile parts will become lighter and EV parts will be developed, leading to increased use of glass fiber for use in reinforced plastic.

With regard to wind turbine blade applications, demand is expected to grow over the long term, with the progress of wind power generation projects proceeding apace around the world arising from global activities for carbon neutrality.

## Our Strengths

With production bases in Japan, Malaysia, the U.S.A., and

Europe, we operate a global production and supply system that enables us to supply products, provide services, and engage in rapid development. 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, for the technology for melting glass fibers, we have been increasing the percentage of electric heating and reducing heating by burning fossil fuels. In particular, we have been implementing all-electric melting, which uses only electricity to melt glass fibers, for over 40 years. We employ manufacturing technologies with a low environmental impact.

For more than 20 years, our plants in Japan and Malaysia have been reusing all of the waste glass generated in our production processes. In the industry, waste glass is normally disposed of in landfills, but we have led the industry in establishing a production system committed to recycling.



## Corporate Strategies

- Building a global supply system by increasing production capacity at our Malaysian Plant and strengthening the competitiveness of our plants in Europe and the U.S.A.
- Expanding market share in automobiles, electrical and electronic components, housing equipment, infrastructure, and other growth areas
- Pursuing environment-friendly manufacturing (improving long-term competitiveness by improving yield and energy efficiency and improving our glass melting technology)

## Business Overview

In fiscal 2021, economic activities were rapidly recovering along with the increase in COVID-19 vaccinations. In such circumstances, our businesses were affected by soaring component prices, disruption in international logistics, and other factors, but strong demand for high-performance resin applications for automobile parts continued. Demand for other wide-ranging applications including housing equipment, civil engineering, and construction was also proceeding steadily. We restarted the facilities that were stopped for production adjustment immediately after the COVID-19 pandemic outbreak in 2020 and took action by strengthening sales activities, resulting in a significant increase in shipments compared with those of the previous fiscal year.

## New Medium-term Business Plan EGP2026

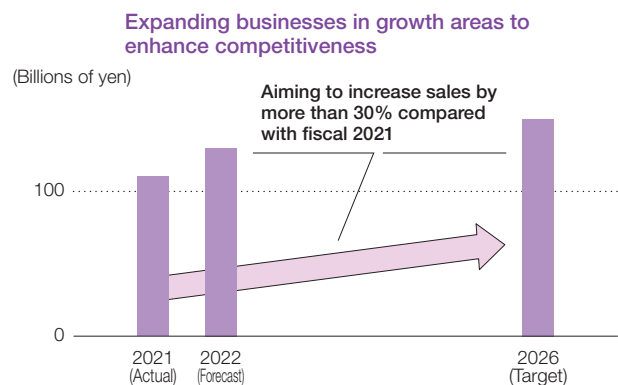
Under our previous Medium-term Business Plan EGP2021, in the U.S.A., we consolidated our three plants into two plants, reviewed our production types, conducted labor saving for our production lines, and implemented other structural reforms, through which we were getting results steadily. However, rapid restart of economic activities made it difficult to secure our workforce, which affected our production. In Europe, we were able to recover profits by streamlining the organization. In terms of development, we got results through development and sales promotion for new

products such as Flat Glass Fiber and Wet Chopped Strands for roofing materials.

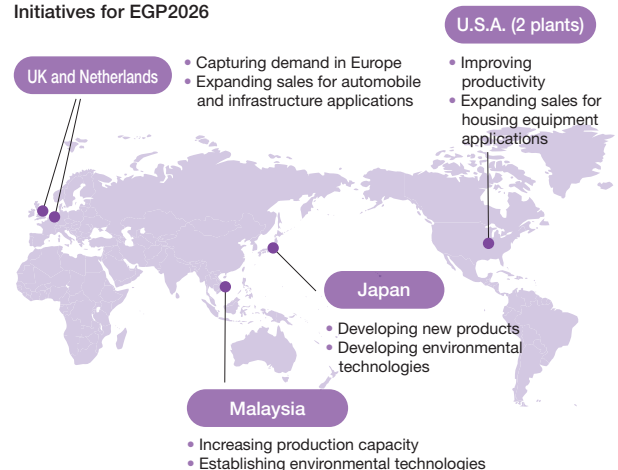
Under EGP2026, we aim to further expand our businesses through the activities shown in the figure below, based on our activities over the last three years.

Moreover, to achieve carbon neutrality and secure our competitiveness on a medium-to-long-term basis, we will increase electricity usage for glass melting furnaces and switch to all-electric melting to shift to highly efficient production, low energy consumption, and low CO<sub>2</sub> emissions.

### Growth Image of Glass Fiber Business (Sales)



### Initiatives for EGP2026





## Performance Materials and Others

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



We continue to actively invest to cope with expanding health care markets.

Senior Vice President  
Group General Manager of Consumer Glass Products Group

**Akira Kishimoto**

## Main Products

### Glass for medical care

Borosilicate glass tubing has excellent acid and chemical resistance and high strength, making it well suited as a material for 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

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 with a variety of properties. They include fire-rated glass, glass-ceramic building materials, and glass blocks.

## The Business Environment

### Glass for medical care

With the growing sophistication of medical care worldwide, demand is increasing for high-grade pharmaceutical glass tubing with excellent chemical resistance and processability. In addition, we saw added demand for vaccine containers to combat the COVID-19 pandemic, so our glass tubing for pharmaceutical and medical use business is required to expand production and supply capacity. Moreover, the market for radiation-shielding glass is expected to enjoy stable demand.

### Heat-resistant glass

In 2021, home renovations were booming mainly in Europe and the demand for replacement cooking appliances and stoves was growing, which helped the market to continue to be favorable. The market conditions are expected to remain stable.

### Glass for building materials

In 2021, the market was also affected by the cancellation and postponement of construction projects due to the spread of COVID-19 pandemic, but this market is expected to exhibit a moderate recovery from 2022 onward.

## 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. We are also working on products that take advantage of the characteristics of our glass-ceramic, which is unique in the industry.

We are promoting other notable products such as top plates for cooking appliances, stove windows, and fireproof windows made of Neoceram, which has an excellent coefficient of thermal expansion and an expansion coefficient of almost zero.



## Corporate Strategies

- **Glass tubing for pharmaceutical and medical use**  
Responding to demand by further expanding the production capacity at our Malaysian Plant
- **Heat-resistant glass**  
Establishing a mass production system to expand sales of top plates for cooking appliances to the European market; developing applications that take advantage of the properties of our world's first colorless and transparent zero-expansion glass-ceramics Cerapure™
- **Glass for building materials**  
Strengthening promotion and expanding sales of our FireLite™ fire-rated glass for fire protection applications in collaboration with our Marketing Department

## Business Overview

In fiscal 2021, shipments of glass tubing for pharmaceutical and medical use increased compared with the previous fiscal year as a result of demand for vaccine containers to combat the COVID-19 pandemic, in addition to strong global demand for glass tubing for pharmaceutical and medical use. Shipments of heat-resistant glass for cooking appliances and stoves increased compared with the previous fiscal year. As for glass for building materials, "heat-resistant glass-ceramic" was classified as a general specification of fire protection equipment for windows in accordance with the revised notice from Japan's Ministry of Land, Infrastructure, Transport and Tourism in 2019. This has made it no longer necessary for us to obtain approval individually from the Minister with regard to our heat-resistant glass-ceramic for use with some window types, which has helped FireLite™ to be widely adopted as fireproof glass in commercial and residential buildings.

## New Medium-term Business Plan EGP2026

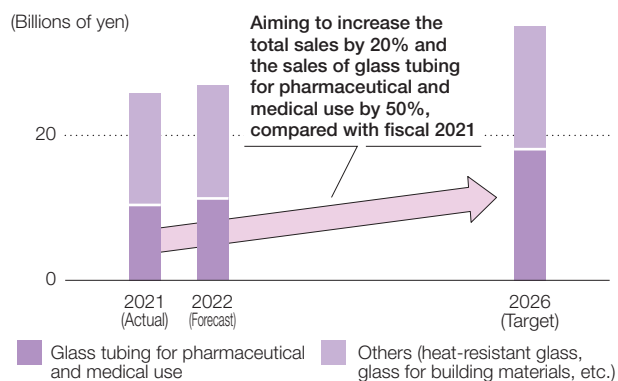
For the five years of EGP2026, we will automate the production, inspection, and packaging processes to establish stable and highly efficient factory systems. We will also strive to develop manufacturing process technologies to achieve carbon neutrality, which the entire company works on.

As for glass tubing for pharmaceutical and medical use, we increased production capacity in Malaysia in October 2020, but we still have been unable to catch up with demand. In addition to improving the productivity of existing facilities, we will make an additional investment to increase production capacity in Malaysia in order to capture demand from overseas including China.

In the area of heat-resistant glass, we have secured human resources, facilities, and other necessary resources, reduced lead times, and instituted a product development system in order to expand sales of top plates for cooking appliances to European customers. We continue our efforts to establish a mass production system and expand sales.

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. In conjunction with our Marketing Department, we will strengthen promotion strategies and highlight the appeal of our excellent product characteristics to enhance our presence in the construction industry.

### Sales Increases in Medical Care, Heat Resistance, and Building Material-related Business



### Applications of FireLite



Family support center Shibuya-ku  
Child-rearing Neuvola



Tokyo Aquatics Centre



## 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 affairs. 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

#### Board of Directors

The Board of Directors makes decisions on important management affairs of our Group and supervises the execution of business affairs. As of March 30, 2022, the Board of Directors consists of ten members (including two representative directors, four inside directors, and four outside directors). The Board of Directors is presided over by the Chairman of the Board. To achieve clarity of management responsibility and develop a flexible management system capable of responding to changes in the business environment, the term of Directors is set at one year. Regular Board of Directors meetings are held monthly, and extraordinary Board of Directors meetings are held when necessary. In addition, at the budget meeting held once a year, the Board of Directors monitors management by hearing explanations directly from the respective executive officers about the business outcomes of the current fiscal year and the budget of the next fiscal year. We have disclosed the reasons for the appointment of each director in the Notice of the 103rd Ordinary General Meeting of Shareholders (held on March 30,

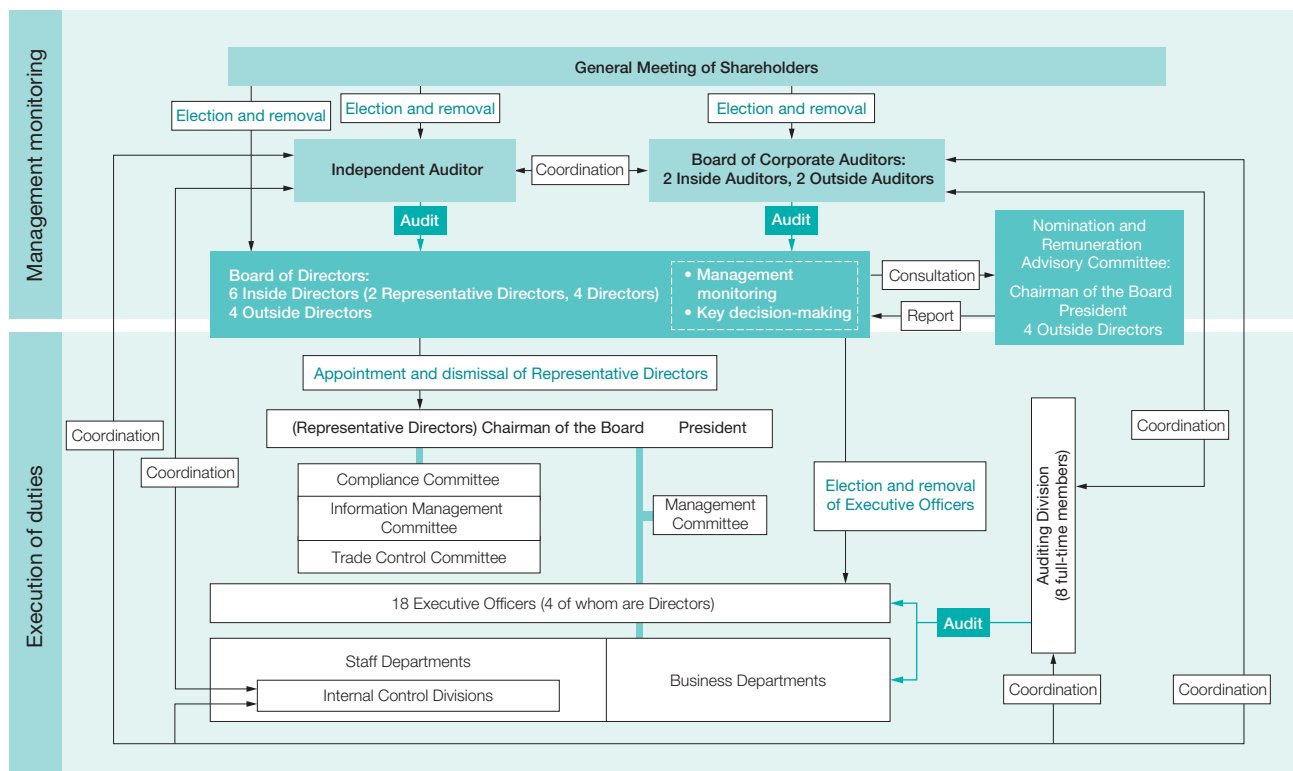
2022), which is available on our website.

([https://www.neg.co.jp/uploads/sites/2/202203\\_103\\_notice\\_en-3.pdf](https://www.neg.co.jp/uploads/sites/2/202203_103_notice_en-3.pdf))

#### Board of Corporate Auditors

We adopt a corporate auditor system. As of March 30, 2022, the Board of Corporate Auditors consists of four Corporate Auditors, two of whom are outside Corporate Auditors. Corporate Auditors conduct audits of the Directors' execution of their duties through assessing business affairs and corporate assets and setting important audit issues according to auditing policies, plans, and assignment of duties established by the Board of Corporate Auditors. They also participate in Board of Directors meetings. Meetings of the Board of Corporate Auditors are held monthly in principle, and Corporate Auditors share information and exchange opinions at these meetings. Corporate Auditors endeavor to improve the effectiveness of their audits by deepening their understanding about the Company's business operations. For this purpose, the Corporate Auditors take various measures, such as attending the

Diagram of Corporate Governance System (as of March 30, 2022)



annual budget meeting and periodically questioning Directors and Executive Officers about their duties and handling of business affairs.

#### Nomination and Remuneration Advisory Committee

As part of our efforts to strengthen our corporate governance, the Company established the Nomination and Remuneration Advisory Committee to ensure transparency and objectivity in the appointment and dismissal of representative directors and in the process of determining director remuneration. The Committee deliberates on the appropriateness of matters related to the appointment and dismissal of representative directors; remuneration policies and systems for directors; the amount of remuneration determined for directors; and reports its conclusions to the Board of Directors.

The Committee comprises two representative directors and four outside directors. Its membership is shown below.

Chair	Shuichi Mori (Outside Director)
Members	Masayuki Arioka (Chairman of the Board) Motoharu Matsumoto (President) Reiko Urade (Outside Director) Hiroyuki Ito (Outside Director) Yoshio Ito (Outside Director)

## Outside Directors and Corporate Auditors

As of March 30, 2022, there are four outside Directors and two outside Corporate Auditors within the Company. Outside Directors make up 40% of all Directors.

In order to strengthen the management supervisory capabilities of the Board of Directors and other corporate administrative bodies by ensuring that they receive informed and objective advice, our outside director appointments include: two corporate management experts with many years of first-hand knowledge and experience in the world of corporate management; a science expert who is specialized and highly experienced in the field of agricultural sciences; and an economist with expertise and a robust background in corporate governance and organizational management.

Outside Corporate Auditors consist of one certified accountant

#### Management Committee

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. Management Committee meetings are held twice a month and when deemed necessary. As of March 30, 2022, the Management Committee comprises six inside directors (two of whom are representative directors) and five senior vice presidents.

#### Executive Officers

We adopt an executive officer system to promote faster decision making, ensure managerial transparency, and enhance the execution of business affairs. As of March 30, 2022, there are eighteen Executive Officers (four of whom are Directors). The President is responsible for execution of duties and the other Executive Officers execute the duties assigned to them by the President. Each Executive Officer serves for a term of one year.

and tax accountant and one attorney at law, who are both independent from the Company and are highly experienced in their respective fields. They proactively perform their auditing duties and reinforce supervisory functions.

When hiring outside Directors and Corporate Auditors, we base our selection on whether candidates satisfy requirements set for independent directors/corporate auditors in accordance with the Tokyo Stock Exchange's rules and regulations. At the same time, we also take into account the importance of avoiding any risks or conflicts of interest with our general shareholders. We have registered all our outside executives as independent directors/corporate auditors with the Tokyo Stock Exchange.

## Analysis and Evaluation of the Effectiveness of the Board of Directors

All of our Directors respond to an annual questionnaire to investigate the effectiveness of the Board of Directors. The questionnaire sent out in fiscal 2021 focused on (1) the Board of Directors in general, (2) the running of Board of Directors meetings, and (3) outside directors.

With regard to the question of whether the Board of Directors deliberated sufficiently in their meetings on corporate strategy and other matters related to the overall direction of the company, some voiced the opinion that corporate strategy was explained in regard to each business separately, but not sufficiently in regard to the overall direction of the company. Another opinion was expressed that while all matters that required deliberation had been put on the agenda, because the large number of matters to discuss was from the most recent and short-term issues, a little more time was needed for the discussion of strategic issues from a medium- and long-term

perspective.

In addition, with regard to the question of whether the internal directors were aware of the difference between their role in executing their own duties and their role as a director and could express an opinion in discussions outside of their immediate purview, and could contribute to improving the quality of deliberations and decision-making by the Board of Directors, some voiced the opinion that while discussions were probably being held in the Management Committee, they wanted internal directors to take a more proactive stance in discussing matters in Board of Directors meetings.

We have determined that the Board of Directors is viable and that its effective functioning has been ensured. However, we will strive to enhance deliberations at Board of Directors meetings by making improvements based on evaluation results and will continue to evaluate its effectiveness.

## Skill Matrix of Directors

For the corporation to be able to respond flexibly to a changing climate and business conditions, and to improve corporate value over the medium and long term, we consider it necessary for directors to have specialized skills in a range of areas related to management.

Name	Position in the Company	Outside Independent	Gender	Nomination and Remuneration Advisory Committee (◎ indicates chairperson)	Major knowledge, experience and capabilities			
					Corporate management	Finance and Legal	Technology	Sales and Marketing
Masayuki Arioka	Chairman of the Board (Representative)		Male	●	●		●	●
Motoharu Matsumoto	President (Representative)		Male	●	●	●		●
Hirokazu Takeuchi	Director		Male		●		●	●
Hiroki Yamazaki	Director		Male				●	
Tomonori Kano	Director		Male		●		●	●
Mamoru Morii	Director		Male			●		●
Shuichi Mori	Director	●	Male	◎	●	●		●
Reiko Urade	Director	●	Female	●			●	
Hiroyuki Ito	Director	●	Male	●		●		
Yoshio Ito	Director	●	Male	●	●		●	●

Note: The table above does not indicate all of the expertise possessed by each director.

## Policy on Deciding Directors' and Corporate Auditors' Remuneration

Our executive compensation for directors (excluding outside directors) comprises a monthly retainer, bonuses, and grants of restricted shares; for outside directors and corporate auditors, remuneration is limited to a monthly retainer.

The total monthly remuneration for directors is within the scope determined by the General Meeting of Shareholders, and the total amount of the bonus payment is determined at the General Meeting of Shareholders after deliberation by the Nomination and Remuneration Advisory Committee subject to the approval of the Board of Directors. The amounts of the monthly retainer and bonus for each individual director are commensurate with those of other companies and are aligned with our business performance (in the case of internal directors only), the economic environment, and objective market research data on remuneration provided by outside specialized agencies. The duties, responsibilities, and achievements of individual directors are also taken into account. The decision is made after comprehensive consideration of the above and is commensurate with what is offered by other companies. The specifics are deliberated on and decided by the

Nomination and Remuneration Advisory Committee, which is chaired by an outside director and the majority of whose members are outside directors. Unless an equal number of Committee members differ in opinion, the decisions of the Committee are deemed to have been adopted by the Board of Directors. Grants of restricted shares are determined by the Board of Directors after consideration of individual duties and responsibilities as well as the share price after deliberation by the Nomination and Remuneration Advisory Committee and are within the scope of the total amount determined by the General Meeting of Shareholders.

The ratio of the monthly retainer, which is a fixed amount of remuneration, to the bonus and grants of restricted shares, which are variable amounts of remuneration, is generally 6:4 (fixed:variable) on a periodic payment basis.

Remuneration for corporate auditors is determined after consultation with the auditors within the scope of the total amount determined by the General Meeting of Shareholders after reference to what is offered by other companies as determined by surveys conducted by external specialized agencies.

## Internal Control

Our internal control system is based on Japan's Companies Act and utilizes basic policies decided upon by the Board of Directors in order to build a system that ensures proper business operations. In addition, we have in place an internal control reporting system, which is based on the Financial Instruments and Exchange Act and which facilitates the development and operation of a system for ensuring proper financial reporting. The condition of financial

reporting-related internal controls is assessed by the internal control division (Auditing Division), which is under the direct control of the president.

In the Internal Control Report released in March 2022, our financial reporting-related internal controls for fiscal 2021 were assessed as "effective." A report by an outside auditing company also assessed the controls as being appropriate in all key aspects.

## Roundtable Discussion of the Outside Directors



We look forward to the challenge of further nurturing the shoots of new business while implementing initiatives aimed at maintaining the steady growth of the Company's existing businesses.

### Hiroyuki Ito

Outside Director

### Shuichi Mori

Outside Director

### Reiko Urade

Outside Director

### What is your opinion of the current governance system and its effectiveness?

**Mori:** My candid impression of the company's situation over the past six years is that Nippon Electric Glass (NEG) has firmly established its governance system, which includes the appointment of outside directors. The ultimate mission of outside directors is to rein in a runaway top management, but I think the ultimate guarantee of governance is the ethics of those in upper management. The management team of NEG comprises of the chairman, the president, and others who place great value on honesty and ethics, which I believe has contributed to NEG's autonomous and sound corporate governance.

**Urade:** When I consider governance, I think it is important that, in addition to establishing a system, that one properly implement it as part of day-to-day management. Since NEG is a manufacturing company with an actual glass manufacturing plant, I think that the Company would not continue if not for steady and cumulative

effort. In that regard, I believe that NEG's business continues to operate thanks to its good faith governance that functions in a diligent manner.

**Ito:** I believe there are two aspects to governance: The first is to act as a check on management, specifically as a restraint against fraud and intemperate actions; the other is to contribute to better management, or to help sustain proper management. I've been watching the movements in the Company for the past two years, and I certainly wouldn't drop my guard, but I'm hardly worried about the former. Regarding the latter, on the other hand, companies have the responsibility to contribute to society through their business and to pursue sufficient profitability to support this contribution. I believe that maintaining a balance between these two is what constitutes appropriate management, which leads to disciplined and vigorous management. Governance has an important role to play in helping to support a balance between the two. In that regard, NEG also has a clear corporate vision of becoming the world's leading manufacturer of special glass. As an outside director, I intend to support everyone to the best of my ability in order to help them realize this vision.





### — How well does the Company support the activities of outside directors?

**Mori:** Regarding the agenda of the Board of Directors meeting, we have asked the board to send us relevant materials in advance, and we also receive explanations from the secretariat. In addition, the minutes and materials of the Management Committee, in which internal management deliberates on important matters, are forwarded to us prior to the Board of Directors meeting. So, we are able to attend the Board of Directors meeting with a full understanding of the discussions that took place at the Management Committee.

**Urade:** The secretariat provides detailed explanations about these matters, and each time we submit a question we receive a detailed and thoroughly researched reply.

**Ito:** On that point, I feel that management information is accessible. In particular, I find it a significant advantage that the president provides a summary of the economic circumstances and social situation as well as the business issues facing the Management Committee, which I can confirm. Because I can gain a very good understanding of the thoughts of top management and the management situation, I have a sense of security regarding the operation of the Company.

### — What is the atmosphere at the Board of Directors meetings?

**Mori:** Some say that the Board of Directors are convening for a longer period of time now than they did before I was appointed, but in recent years, discussions have become more active, as it was originally a place to seriously discuss each agenda item. However, since internal directors engage in discussions in advance at the Management Committee and other meetings, there is a tendency for outside directors to comment more frequently at the Board of Directors meetings. To that extent, it is possible for us to point out without hesitation problems that are difficult for internal directors to put their finger on as well as issues

regarding business and technological development.

**Ito:** I've been serving in this position for a relatively short period, so it is sometimes difficult to understand the technical content. I also appreciate the willingness of the chairman and the president to answer my questions with carefully thought-out explanations. In addition to receiving clear answers to our questions, I feel that we outside officers are benefiting from considerations that make it easier for outside officers to participate in discussions. These include explanations and management backgrounders related to technology that are presented in an easy-to-understand manner.

**Mori:** I am the longest-serving outside director, but I am still not intimately familiar with the glass industry, and to be honest, discussing the direction of the Company and its future strategy can be challenging. However, since outside directors have a mission to supervise compliance with laws and regulations and the legitimacy of decision-making procedures, I intend to continue to fulfill my responsibilities in that regard.

**Urade:** There are certain things that left an impression on me with respect to the Board of Directors meeting. At one time NEG was engaged in difficult discussions about what it would do to continue operating businesses outside Japan that were not experiencing an earnings recovery. The president said, "The situation is difficult at the moment, but we have important locations that have a positive future outlook that should not be parted with — I will not make an easy decision." This is a clear message that sustainable growth cannot be achieved simply by pursuing short-term profits and represents upper management's stance to ensure NEG remains a leading company. When I heard this, I suddenly had a clearer understanding of the situation.

**Mori:** I have the strong impression that NEG has grown by doing everything with due diligence and by working with steadfast resolve. In the past, NEG predicted the end of glass production for cathode ray tubes and undertook a bold shift to the liquid crystal display glass business. More recently, it confidently executed a bold strategy: it took the plunge and acquired a huge glass fiber business in Europe and the North America in an effort to expand its business portfolio. This type of major investment represents the one of NEG's strong points.





## — What is your opinion of the new Medium-term Business Plan?

**Mori:** The plan itself was well formulated, and I think it's firmly grounded. The key is to enhance the business portfolio with an eye to the future. The Company is well supported by the two pillars of display glass and glass fiber, but the real challenge is how to develop a third pillar. Research and development should be further strengthened. While I have high hopes for the commercialization of all-solid-state batteries, it is not limited to this. It must also nurture the development of more innovative new businesses. The key to doing so is the effort to strengthen NEG's human resources foundation. NEG is a company that has done well so far with a small number of exceptionally talented individuals, so in a sense it is quite efficient. However, I think it will be necessary to allow for some waste to accrue through the adoption of a trial-and-error approach to various initiatives. Expansion outside Japan is also progressing. I think that investing in people, including the handing down of technology, will be a critical aspect of this Medium-term Business Plan.

**Ito:** From the outset, NEG has always been a company with a good balance of offense and defense, but this Medium-term Business Plan lays out an approach intended to strengthen the company's offensive stance. Along with the intention to expand existing businesses, the need to develop new fields is a conscious part of the plan. The challenge the Company faces is how to attract and develop its human resources. In the future, I think it will be necessary to develop a system for strengthening their personnel foundation.

**Mori:** In my experience, strengthening of the human resources foundation is not something that can be achieved overnight. While respecting the desires of younger members, it is also important to maintain a climate in which they are free to take on challenges. Moreover, to that end I think it is important to nurture the green shoots of technologies and businesses that have emerged by having those in supervisory positions provide their expert advice.

**Ito:** It is a system that develops the ideas submitted by young members and utilizes them, which leads to the emergence of new businesses.

**Mori:** In my experience, developing innovations requires, in a sense, people who tend to be disruptive outliers. Those who take on new challenges are not always well behaved, so it takes patience to keep them on. In that respect, it is good that the employees of NEG are diligent, but overall, they are somewhat reserved.

**Urade:** When it comes to strengthening our human resources foundation, I would like the Company to further accelerate its diversity initiatives. The concept of diversity is broad, but in Japan, promoting the active participation of women has become a major issue. I urge the Company to put more effort into hiring female employees, training them, and appointing them to managerial positions. In order to do so, it is essential the system be expanded, that awareness be raised internally, and that top management



show leadership on the issue. I hear that there are few job applications submitted by women, and consequently there are limited numbers of women willing to take on managerial positions. But I believe there exist various ways to review recruitment methods and appoint female managers at an early stage in their careers.

**Ito:** That's right. I think promoting the active participation of women as a breakthrough in personnel system reforms could be the starting point for kickstarting new growth.

**Mori:** In terms of the human resources foundation, acquiring management personnel for the future is also a major challenge. The Nomination and Remuneration Advisory Committee is promoting discussions on this issue. Last year, we clarified our requirements with regard to management personnel; in the future, we will prepare ourselves well for upcoming changes at the top.

## — Please give us your views on the Company's medium- and long-term growth prospects.

**Mori:** NEG has strengths in its ability to develop various new products and its technical capabilities to precisely meet the various needs of customers, based on the universal material of glass. On the other hand, the application and marketing capabilities of newly developed products and patents require further enhancement. We believe that the strengths of technological development capabilities will be made known to the industry more widely and collaboration will lead to new development through cross-industry exchanges and information dissemination at exhibitions.

**Urade:** Having its headquarters in Shiga Prefecture has shaped the character of NEG. Even though the fact that such a great company is located in Shiga, I feel it is a loss if this is not well publicized.

**Ito:** NEG has entered a new phase that includes support for its new Medium-term Business Plan and its efforts to address carbon neutrality. I would like the public to learn more about these facts and initiatives, so it may be time to consider new strategies related to corporate identity. I hold high expectations for new challenges in everything the company envisions for the future.

## Directors, Corporate Auditors, Executive Officers (As of March 30, 2022)

### Directors



Chairman of the Board  
(Representative Director)

**Masayuki  
Arioka**

Apr. 1978 Joined Nippon Electric Glass  
Mar. 1997 General Manager of Glass Fiber Division, Production  
Jun. 1999 Director (incumbent)  
Jun. 2002 Vice President  
Jun. 2004 Senior Vice President  
Apr. 2008 Executive Vice President  
Jun. 2009 President  
Mar. 2015 Chairman of the Board (incumbent)



President  
(Representative Director)

**Motoharu  
Matsumoto**

[Auditing]

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



Director and  
Executive Vice President

**Hirokazu  
Takeuchi**

(Research & Development,  
Process Development &  
Engineering, Electronic  
Products Business)

Apr. 1982 Joined Nippon Electric Glass  
Apr. 2010 Vice President and  
Group General Manager of Electronic Products Group  
Jun. 2013 Director (incumbent) and Senior Vice President  
Jan. 2017 Executive Vice President (incumbent)



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 of Technical Division  
Apr. 2011 Vice President  
Jan. 2016 Group General Manager of 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 of Display Glass Division, Production  
Jun. 2008 Executive Vice President  
Jan. 2016 Vice President  
Jan. 2020 Senior Vice President (incumbent)  
Jan. 2021 Group General Manager of Display Glass Group (incumbent)  
Mar. 2021 Director (incumbent)



Director and  
Senior Vice President

**Mamoru  
Morii**

(Administration, Human Resources,  
Purchasing, Information Systems  
and Sales Management)  
[Accounting, Corporate Strategy,  
Marketing, Tokyo Branch Office and  
Security Trade Control]

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



Outside Director

**Shuichi  
Mori**

(Independent Director)

Apr. 1972 Joined Sumitomo Corporation  
Jun. 2008 Executive Vice President (Representative Director) of Sumitomo Corporation  
Mar. 2011 Left Sumitomo Corporation  
President (Representative Director) of Jupiter Telecommunications Co., Ltd.  
(currently JCOM Co., Ltd.)  
Jan. 2014 Chairman (Representative Director) of Jupiter Telecommunications Co., Ltd.  
Jun. 2015 Left Jupiter Telecommunications Co., Ltd.  
Mar. 2016 Outside Director of Nippon Electric Glass (incumbent)  
Jun. 2017 Outside Director of Tokai Cable Network Corporation (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)

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



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 Corporation)  
Jun. 2014 Senior Managing Director (Representative Director) of Panasonic Corporation  
Apr. 2017 Vice President (Representative Director) of Panasonic Corporation  
Jun. 2017 Executive Vice President (Representative Director) of Panasonic Corporation  
Jun. 2019 Left Panasonic Corporation  
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)

## Corporate Auditors



Full-time

**Masahiko  
Ohji**

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



Full-time

**Yoshihisa  
Hayashi**

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



Outside

**Tsukasa  
Takahashi**

(Independent Corporate Auditor)

Apr. 1989 Registered as attorney at law and joined Katsube Law Office (currently Katsube  
Takahashi Law Office)  
Jul. 2012 Representative of Katsube Takahashi Law Office (incumbent)  
May 2013 Outside Corporate Auditor of Aeon Delight Co., Ltd. (incumbent)  
Mar. 2019 Outside Corporate Auditor of Nippon Electric Glass (incumbent)  
Jun. 2020 Outside Corporate Auditor of Nippon Shokubai Co., Ltd. (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)

## Executive Officers

### Senior Vice Presidents

**Akira Kishimoto**  
[Consumer Glass Products  
Business]

**Norio Nakamura**  
[Glass Fiber Business]

**Haruki Matsumiya**  
[Process Development &  
Engineering]

**Masaaki Kadomi**  
[Research & Development]

**Masahiro Kobayashi**  
[Electronic Products Business]

### Vice Presidents

**Hiroaki Nomura**  
[Glass Fiber Business (Sales),  
Electric Glass Fiber America, LLC]

**Takuo Horiuchi**  
[Display Glass Business (Sales),  
Sales Management]

**Hitoshi Kanaya**  
[Process Development & Engineering]

**Toshiyuki Nakajima**  
[Administration, 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)]

## 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 continues to comply with laws and regulations. The Committee also provides information on corporate ethics and is primarily focused on the items listed at right.

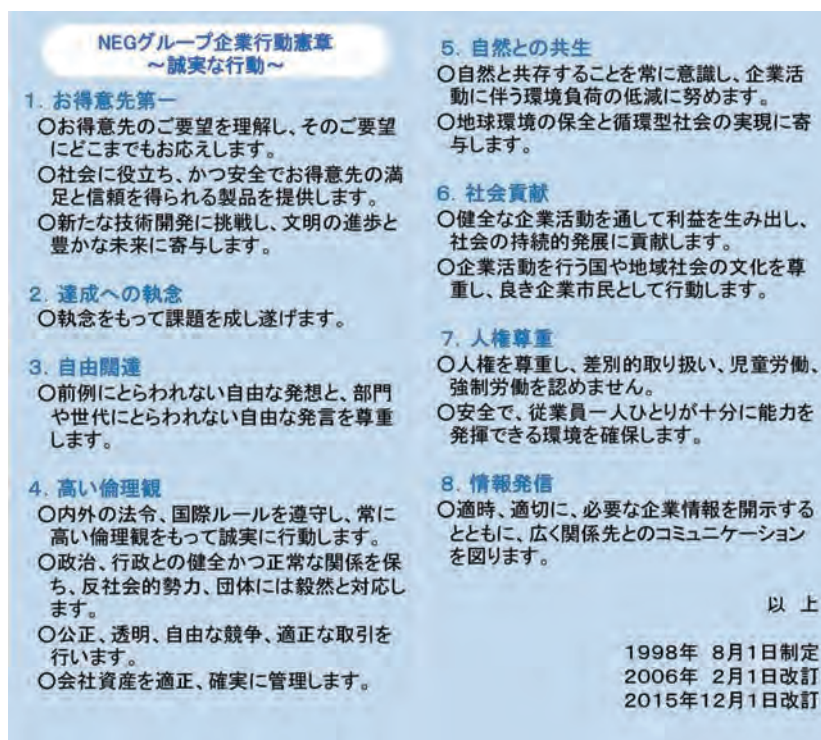
- Drafting revisions to the Group Code of Conduct and Principles of Activities
- Collecting and analyzing information on compliance and providing compliance training
- Managing an internal whistleblowing system (NEG Hotline)

### 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.



#### Internal Whistleblowing System

An internal 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.

#### The UK Modern Slavery Act

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

## Import/Export Control Initiatives

We have established a Trade Control Committee as part of efforts to ensure thorough implementation of export controls and compliance with various export-related legal requirements, such as the Foreign Exchange and Foreign Trade Act. Among other things, the Trade Control Committee scrutinizes the implementation of export control procedures, facilitates Foreign Exchange and Foreign Trade Act-related training, and develops internal rules and regulations.

Also, in order to ensure appropriate compliance with import/export customs procedures and tax reporting, we have established the Specified Export Declaration Office and Special Import Declaration Office to facilitate the implementation of trade-related business according to the requirements of the Customs Act and other tariff-related laws. As part of their efforts to ensure thorough compliance and greater awareness, both of these offices conduct regular Group-wide auditing and employee

training.

These and other initiatives have earned us certification as an Authorized Economic Operator (AEO) by Kobe Customs for both exports and imports. This is a status conferred on those economic operators that have well-developed cargo security controls and legal compliance structures in place.

Thanks to this, not only the Company but also its overseas subsidiaries are conferred AEO mutual recognition, thereby expediting smoother import/export customs procedures. In addition, we are the only Japanese glass manufacturer to be certified as an AEO for both imports and exports. (Current as of March 29, 2022.)

In October 2021, Electric Glass (Guangzhou) Co., Ltd. earned an Advanced Certified Enterprise, the highest status under Chinese AEO classification system from the local Customs.

## Implementing BCP

To be prepared for disasters such as earthquakes, typhoons, floods, fires, and mass infections, we created a disaster management manual based on the company's disaster preparedness regulations, and we carry out emergency drills periodically. In the wake of the 2011 Great East Japan Earthquake, we reviewed our disaster management measures and implemented seismic reinforcement to our buildings, production facilities, and equipment.

In 2015, we began using Business Continuity Planning (BCP), which replaced the previous disaster preparedness regulations. To facilitate the processes necessary for BCP, a manual providing information on detailed preparation procedures and actions that should be taken when an emergency or disaster strikes was created. In accordance with the implementation of BCP, we have also introduced a system that will efficiently confirm the whereabouts of all domestic employees and their families in

case of an emergency. Moreover, in order to resume production and continue to supply our customers in the aftermath of a disaster, we are working to strengthen our risk management system of procurement.

#### Basic Policy of BCP

- ① To protect each employee and their families and to secure their safety
- ② To protect production equipment, to prevent the spread of damage as well as secondary disasters from occurring within the company and the adjacent communities, and to help with rescue efforts
- ③ To resume providing customers with products and services as rapidly as possible

## 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.



## 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 in the early 1970s taught us to undertake environmental conservation as an issue crucial to the sustainability of our operations. A particular characteristic of special 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 the 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

Environmental conservation is a duty for a company like ours whose operations incur a high environmental burden, so 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, race, or so on—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.



We have put into writing our way of thinking on CSR and what our three priority themes are. We are actively pursuing CSR activities focused on divisions central to each priority theme, i.e., the Environment Division, Human Resources Division, Administrative Division, and Fundamental Technology Division. Through activities like these, we are contributing to the realization of a sustainable society and the improvement of our corporate value.

## 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 top management priorities as a special 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 promoting 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 the 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 the 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 realization of a recycling-based society by adopting high-efficiency 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 preservation of biodiversity and 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.

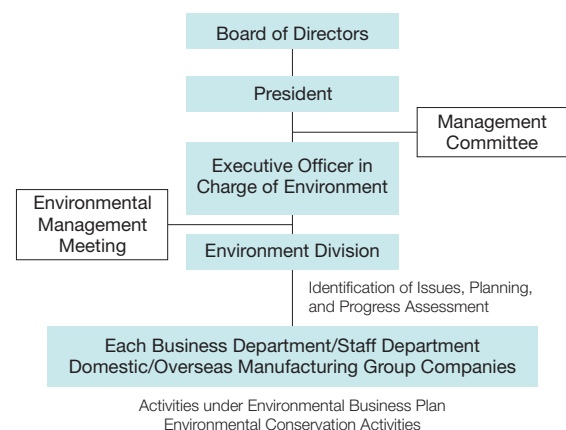
### Environmental Management System

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 environment.

#### Environmental Management Meeting

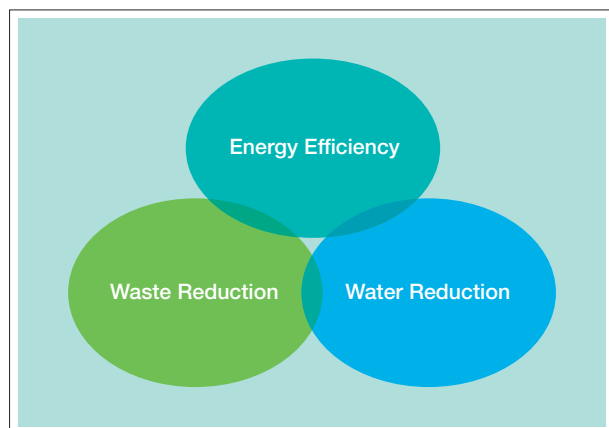
This meeting is held every three months. The executive officer in charge of environment chairs the meeting, which is attended by the President, Executive Vice President, Senior Vice Presidents, General Managers of our business departments, and representatives of our major group companies that carry out manufacturing. The meeting serves as a forum for deliberations related to groupwide environmental activities, covering our responses to climate change and many other environmental issues, along with the rollout of environmental conservation initiatives.

#### 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. Through these efforts, we are demonstrating our commitment to reducing our environmental impact while adopting measures to address the issue of global warming.



### Energy Efficiency

We are making visible the total amount of energy used by the group globally in our product manufacturing processes, and have begun implementing an energy business plan aimed at using energy efficiently and reducing waste. The data we gather will be analyzed to determine what productivity improvement measures to implement and to create efficiency improvement plans and set consumption rate targets for more efficient energy use.

We will combine these initiatives with improvements in electricity usage and the introduction of new manufacturing process technologies, such as hydrogen combustion. Promoting efforts to reach our targets for carbon neutrality, we aim to be the world's most efficient and most eco-friendly glass manufacturer.

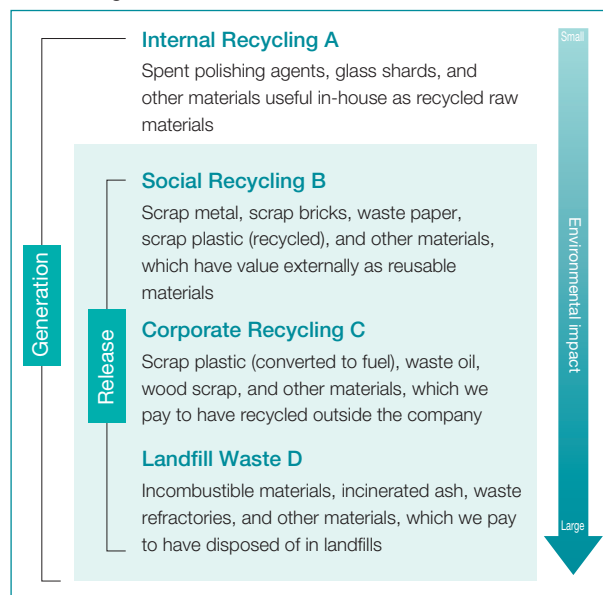
### Waste Reduction

We separate waste into two categories: "normal waste," which comprises waste generated by our normal production activities, and "bulky construction waste," which is waste generated by such activities as periodic maintenance of glass melting furnaces. These waste categories are further separated into the four subcategories shown in the accompanying figure, with "Landfill Waste D" being our highest waste reduction priority due to its high environmental impact.

## 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 both save energy and generate energy.

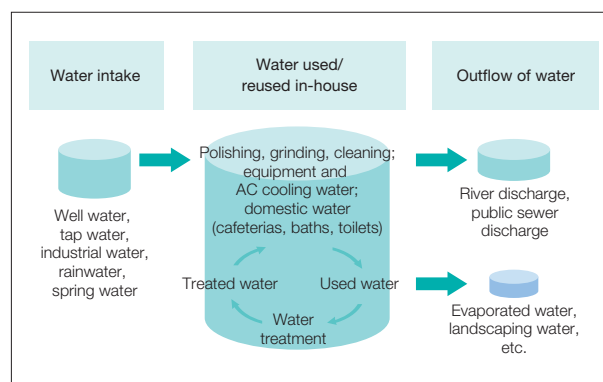
### Waste Categories



### Water Reduction

We consider the amount of water that we use to be an important factor in determining how skillfully we perform manufacturing. By managing our water usage, intake, and outflow, we increase our understanding of the entire glass manufacturing process, while further improving our process technologies and equipment. Management efforts continue to be focused on decreasing our rate of water consumption.

### Water Flow





## Special Feature

# Our Initiatives for Carbon Neutrality

We aim to achieve carbon neutrality by 2050 through aggressive investments, R&D, and other initiatives.

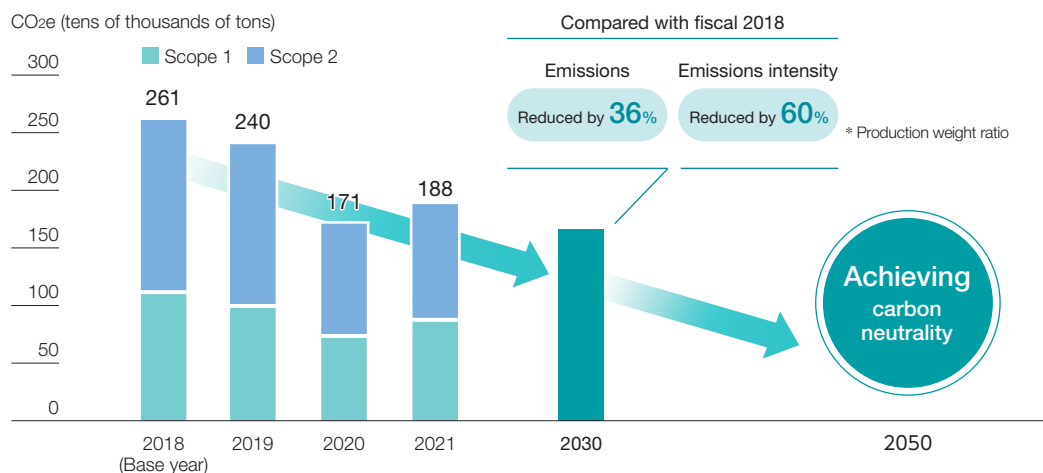
Carbon neutrality is a critical global issue to prevent global warming. Under such circumstances, in February 2022, we determined target values to reduce CO<sub>2</sub> emissions and announced them together with our initiatives to achieve the targets.

## CO<sub>2</sub> Emissions Reduction Targets

By 2030

CO<sub>2</sub> emissions compared with 2018 (Scope 1 + Scope 2) ..... Reduced by **36%**  
Emissions intensity (Scope 1 + Scope 2) ..... Reduced by **60%**  
\* Production weight ratio

Achieving carbon neutrality by 2050



## Supporting the TCFD Recommendations

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 businesses, as well as to inform everyone of financial impacts and our countermeasures. We continue to proceed with analyses based on the TCFD recommendations and disclose information appropriately.



## ► Approach to CO<sub>2</sub> Emissions Reduction

Reducing the amount of greenhouse gases emitted from glass melting furnaces is a critical issue for the glass manufacturing industry, and we have been working on this issue as our highest priority.

### Reducing Energy Loss Caused by Exhaust Gases

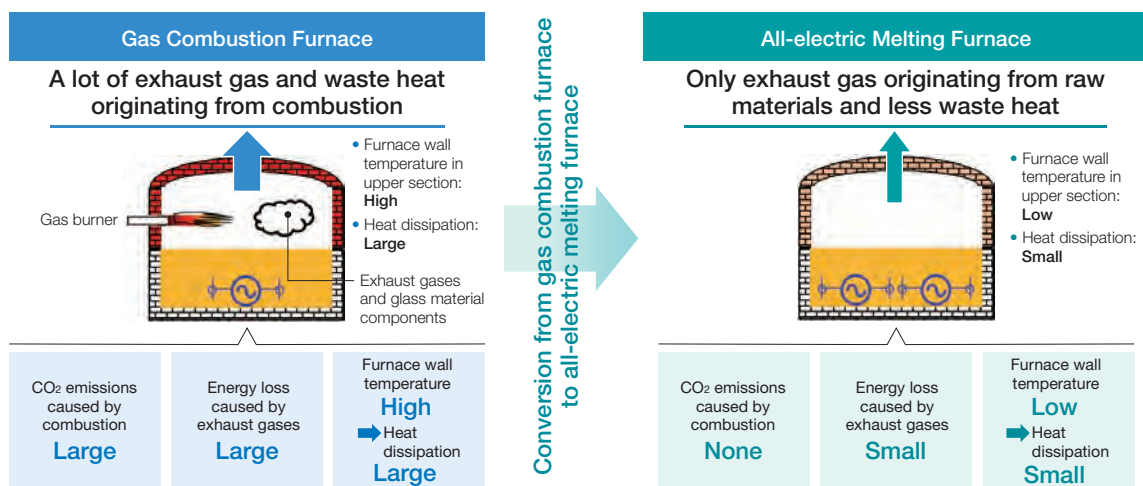
The most efficient manufacturing in the world leads to the most environmentally friendly manufacturing in the world. To achieve this, we will need to improve product quality and yield to minimize the amounts of raw materials and energy that we use for our manufacturing. It is also important to improve thermal efficiency. Conventional glass melting furnaces used to waste a lot of heat due to exhaust gases. In 1993, we installed Japan's first oxy-fuel firing furnaces, which largely prevents nitrogen from entering the furnaces, thus significantly reducing the volume of exhaust gases and improving thermal efficiency. This technology has now been adopted for almost all of our furnaces.

### Fuel Conversion for Glass Melting Furnaces

In the past, we were switching fuels for our glass melting furnaces from heavy oil to LPG and ultimately to natural gas to reduce CO<sub>2</sub> emissions. In 2010, we completely abolished the use of heavy oil and completed switching to natural gas. We continue technological development for CO<sub>2</sub>-free fuels such as hydrogen.

### Improving Electricity Usage

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 significantly improves energy efficiency, eliminates CO<sub>2</sub> emissions caused by combustion, and drastically reduces the amount of heat dissipation from melting furnaces. Up until now, we have been using electrical energy together with gas combustion, but we are actively proceeding with conversion to all-electric melting furnaces, which use only electrical energy to melt glass. In the future, we will gradually switch our electricity to renewable energy.

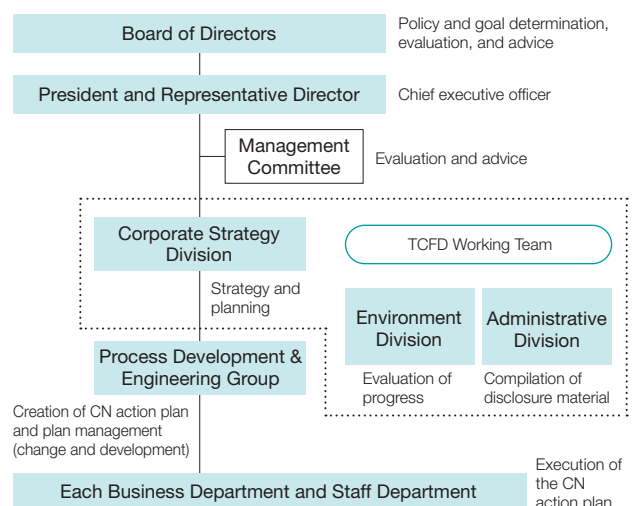


In April 2021, we set up a carbon neutrality project and drew up an implementation plan to reduce CO<sub>2</sub> emissions. We continue to promote various initiatives to achieve our targets.

### Initiatives to Achieve Targets

Category	Initiatives
Manufacturing process	Promoting 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 facility
	Facility optimization (to resolve difference between demand and supply, etc.)
	Operation optimization (external environment, production process, etc.)
Technological development	Technological development for CO <sub>2</sub> -free fuel (hydrogen, etc.)
Procurement	Investment and procurement for renewable energy

### Carbon Neutrality (CN) and TCFD Promotion System



## Diversity and Inclusion



We maintain a safe and healthy working environment for all employees and strive to develop employee competencies.

Vice President and General Manager of the Human Resources Division

### Toshiyuki Nakajima

Joined the Company in 1989 and worked at the Fujisawa Plant in labor affairs, purchasing, and accounting, then joined human resources at the head office to work in labor affairs. Posted in China from 2006 to 2012. Headed the establishment of a joint venture in Shanghai and returned to Japan in 2013. Posted to Fujian Province in 2014, in charge of setting up a company and was appointed its vice president. Returned to Japan in 2016. Appointed as General Manager of the Human Resources Division in 2017. Has held his current position since 2020.

## Our Policy on Employee Education

As we pursue the goal of becoming the world's leading manufacturer of special glass, the capabilities of our personnel are more important than anything else. We have long regarded experience as essential to employee growth, so young workers are intentionally given active roles and responsibilities. For individuals to grow, they need to apply their knowledge to real situations and then reflect on the outcomes. Establishing this cycle that leads to the next implementation is vital. On-the-job training (OJT), which involves gaining experience not only through successes but failures as well, is a core component of training at any company.

We also provide valuable learning opportunities that are moderately removed from the day-to-day work experience in the form of a training course. Using such a format, employees have the opportunity to attend lectures given by an instructor and work with their peers to find out for themselves in what areas they are lacking and need to develop further. Those realizations lead to their next stage of growth.

One might think that attending a course that combines classroom learning with role playing will immediately yield

results that can be applied in the workplace and lead to growth. But in reality, not all such training has an immediate effect. Participation in various training programs on an ongoing basis stimulates self-reflection and intellectual curiosity, so the true value may be in fostering self-confidence, which is needed to become the kind of person who has the desire to learn in the long term after the programs.

The Company offers a range of training programs, from periodic level-specific training for young employees and skills training directly connected with job functions to English-language study, and a self-development educational system designed to encourage individual improvement efforts. We work toward the ideal of having our personnel contribute actively at various stages in all areas to build the future of the Company. We do this by promoting on-the-job training and the acquisition of knowledge through various training programs, and by encouraging the implementation of that knowledge. We plan to continue setting up such opportunities for self-realization on an ongoing basis.

## Recruitment and Workplace Environment Maintenance

In addition to our continued commitment to provide employment for people with disabilities, we also strive to cultivate a work environment in which the diverse backgrounds and values of employees are respected and in which employee welfare and happiness are prioritized.

### Employment 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. For its outstanding action in hiring and training young people, this subsidiary was in 2018 granted Youth Yell certification from Japan's Ministry of Health, Labour and Welfare, the second special-purpose company in Japan to be certified. As of the end of 2021, we had achieved a 4.28% employment rate for people with disabilities. We are now working to raise this to 4.6%, which is double the statutory requirement.

### Support for Raising the Next Generation and Women's Empowerment

We aim to create a workplace environment that allows our employees to balance their work with their important commitments to raising children and taking care of their families. To that end we have in place measures to support childcare and to empower women. In 2019, we received Platinum Kurumin accreditation from the Japanese government as a company that provides excellent childcare support. We are implementing activities that facilitate exchanges of ideas among female employees, which has resulted in the introduction of easy-to-use systems that facilitate work for employees of all backgrounds, and efforts to promote awareness of these systems within the Company, for example.

### 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 that 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.

### Support for 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.



## 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.

## 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, and have been implementing work-style reforms. 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.

### Work-style Reforms

We started promoting work-style reforms in 2017. We have improved efficiency by eliminating unnecessary and duplicated work through task inventory checks and by maximizing the use of IT. These efforts have enabled us to reduce overtime work and increase the taking of paid leave. The benefits of these efforts have been returned to our employees via an expanded welfare program and other ways.



## Voices for Diversity

### Business success depends on a diverse workforce

I'm Head of Human Resources for EGFU. The HR function centres around people, and people are at the heart of everything we do; supporting employees through their lifecycle at NEG and making it a positive experience. Our objective is to make NEG an employer of choice, by offering fair and competitive terms and conditions, recognising the efforts of our colleagues through our reward and recognition policies, offering transparent development and career progression opportunities.

HR supports the business in safeguarding its future through the acquisition of talent and in ensuring that we steer and drive the right capabilities for our current and future needs. Having a diverse workforce both in terms of skills and people, ensures that we attract and retain people to support our growth and drive an inclusive culture. Creating the right culture, for me, is hugely important to our success as a business and is what makes EGFU a great place to work.

There are certainly cultural differences between the UK and Japan's working styles and we have embraced those differences and adapted to each other, since becoming a part of the NEG group. From a strict diversity and inclusion point of view, it remains disappointing that there are no western representatives in the published top management list, which may be an area of improvement and crucial for retention of senior overseas talent.



Electric Glass Fiber UK, Ltd.  
Head of HR  
Sally Ann Blades

### Creating a positive environment for diverse personnel by taking new perspectives

After joining the Company, I was assigned to work in the Sales Division of Glass Fiber Group and did sales within Japan. Since August 2021 I have been working in Germany at a sales subsidiary. In this position, I have been handling sales matters as well as product inventory control and sales tabulation work. Since coming to Germany I have had the opportunity to work with people from many different cultural backgrounds and I am still working out how to manage my job and carry it out smoothly in this new environment.

I was the first female salesperson in this division in Japan. In the process of doing my job, I realized that women working side-by-side with men is much more rare in Japan than I had thought. I am hoping the Company to create a positive environment that is easy for a greater diversity of people to work in by sometimes taking entirely new points of view to create new frameworks—not by relying on existing systems.



Nippon Electric Glass Europe,  
GmbH  
Sales Manager  
Azusa Shimomura

### Intense (and hot) training as a new employee as groundwork for the job

I'm now in my fourth year with the Company and I mainly do administrative work related to things like company stock, legal compliance, and the board of directors. I got training at plants in Japan for half a year, and then studied language for three months in Shanghai before being assigned a position. During my training, doing up-close inspection work of the glass melting and forming processes, I felt the heat of working with glass being melted at over 1,000°C. I was also exposed to discussions of how to improve processes, and I was able to deepen my understanding of glass production through both observing the manufacturing and talking with my peers and superiors. I use that knowledge in my work today. It helps me to understand the discussions at board meetings and it comes in handy when I'm considering how to express things in disclosure documents describing the Company's state of affairs and the like. Such systematic intense on-the-job training is just an example, but it shows how the Company's training programs encourage my growth step by step, which provides a sense of meaning and purpose in doing my job.



Administrative Division  
Naoki Soga

## Community Contribution

We contribute to the development of local communities through initiatives based on activities rooted in those communities. Our main activities include educational support and involvement in community events.

### Supporting the Younger Generation

#### 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, where the Company is based. In 2021, we donated a large-screen display to the environmental study ship, Uminoko.



COVID-19, but a class was finally held in December 2021 with preventive measures in place.



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

- The plants and showroom welcomed approximately 70 people in 2021.
- Approximately 220 people used our facilities that are open to the public (green space, etc.) in 2021.

#### Visiting Lessons

(Sponsorship of Otsu City Science Museum's "Innovation for the Future" classes for inventing, discovering, and making things)  
Classes were suspended in 2020 to prevent the spread of

#### 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.

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

In conjunction with the University of Shiga Prefecture, in 2020 the Company 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).

### 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 2021 Activities (Inside and Outside Japan)

Employees joining community activities	Approx. 200
People visiting our summer festival and other events	Suspended
People joining dialogue between the Group and neighborhood councils	Approx. 40

#### Photographs of Main Events and Support Activities



Otsu: Donation of books to children's cafeterias in Shiga Prefecture



Electric Glass (Xiamen): Support for PCR testing site



Paju Electric Glass: Donation to children with disabilities

## 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, as we aim to further improve customer satisfaction while delivering 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.

#### Product Safety Management Committee

Our Product Safety Management Committee enhances the safety of our products. Committee members are selected from Line Departments in charge of manufacturing and sales and from Staff Departments in charge of product design and process design.

#### 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.

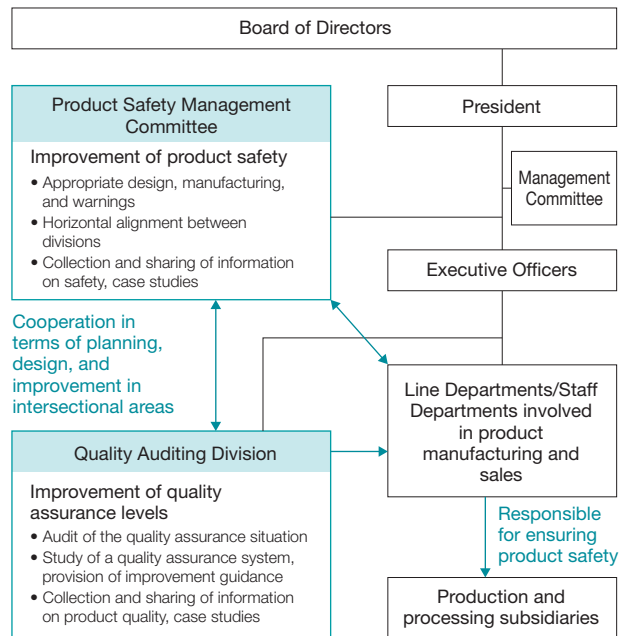
#### Quality Assurance Department

Each of our Line Departments involved in product manufacturing incorporates a Quality Assurance Department. Our personnel undertake quality assurance for each product in response to customer requests and to help improve manufacturing expertise.

#### Quality Auditing Division

The Quality Auditing Division at our head office drives cross-company efforts to improve quality assurance levels within the entire group.

Diagram of the Product Safety and Quality Assurance System



### Communicating Product Information

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



API China (Wuhan, China)

#### Exhibitions

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

## Communicating with Business Partners

### Basic Procurement Policy and Request to Our Business Partners

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.

#### 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

#### Request to Our Business Partners

- ① Stable supply of purchasing products, plus maintenance and improvement of product competitiveness
- ② Compliance with laws, regulations, and social norms, and respect for human rights
- ③ Environmental preservation and operational safety
- ④ Appropriate information security
- ⑤ Sound corporate management

In addition, we place great importance on responsible procurement practices aimed at mitigating the risk of sourcing conflict minerals (such as tin, tantalum, tungsten, and gold), which are used to finance armed groups abetting human rights violations in the Democratic Republic of the Congo and adjoining countries.

#### Procurement

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

## Communicating with Shareholders and Investors

### General Meeting of Shareholders

On March 30, 2022, the 103rd General Meeting of Shareholders was held in the conference room at our head office. Following a report on the fiscal year results and the state of our business, our management responded in a sincere manner to issues raised by our shareholders.



### 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/>

### Communicating with Investors

We communicate with institutional investors inside and outside Japan through a variety of means, including individual interviews, briefing sessions on financial results, and IR-related events organized by securities firms. In fiscal 2021, the COVID-19 pandemic made face-to-face interviews very difficult, so we provided additional opportunities for communication through teleconferences, online meetings, and more. The opinions and requests that we received from investors are fed back to our management and utilized to help improve our investor relations activities.

#### Fiscal 2021 Results

Total number of dialogues carried out	169 companies
---------------------------------------	---------------



## Nippon Electric Glass Co., Ltd. and Consolidated Subsidiaries for the Ten Most Recent Years

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

	2013/3	2014/3	2014/12*	2015/12
<b>For the year</b>				
Net sales	¥ 287,304	¥ 252,548	¥ 192,692	¥ 251,178
Operating profit	24,968	16,171	5,224	22,035
Profit (loss) attributable to owners of the parent	10,603	12,432	5,938	9,637
Depreciation and amortization	46,105	35,891	28,420	37,154
Capital expenditures	37,487	46,962	45,214	49,212
Research and development	6,833	6,920	5,527	6,183
<b>At year-end</b>				
Total assets	¥ 697,386	¥ 707,021	¥ 731,185	¥ 726,938
Current assets	243,577	247,502	264,001	267,430
Net property, plant and equipment	395,376	393,751	397,273	386,013
Current liabilities	88,038	86,970	82,701	105,400
Interest-bearing debt	102,604	99,492	109,141	109,731
Net assets	495,295	510,807	522,577	519,801
<b>Cash flows</b>				
Cash flows from operating activities	¥ 55,111	¥ 46,700	¥ 38,837	¥ 46,797
Cash flows from investing activities	(46,545)	(33,843)	(29,264)	(32,638)
Cash flows from financing activities	7,667	(11,190)	1,699	(7,892)
Cash and cash equivalents at end of year	121,741	123,888	129,823	133,856
<b>Per share of common stock (yen and dollars)</b>				
Profit (loss) attributable to owners of the parent	¥ 106.58	¥ 124.97	¥ 59.69	¥ 96.88
Net assets	4,914.84	5,057.28	5,163.32	5,159.30
Cash dividends	80.00	80.00	60.00	80.00
Operating profit ratio (%)	8.7	6.4	2.7	8.8
Equity ratio (%)	70.1	71.2	70.2	70.6
Return on equity (%)	2.2	2.5	1.2	1.9

Notes: 1. Profit (loss) attributable to owners of the parent 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 profit attributable to owners of the parent per share was not calculated.

3. 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, 2021 of ¥115 to U.S. \$1.00.

4. As of December 31, 2021, Nippon Electric Glass Co., Ltd. had 25 consolidated subsidiaries and 1 affiliated company accounted for by the equity method.

(Millions of yen and thousands of U.S. dollars, except per share figures)

	2016/12	2017/12	2018/12	2019/12	2020/12	2021/12	
	¥ 239,412	¥ 282,447	¥ 300,327	¥ 257,511	¥ 242,886	¥ 292,034	\$ 2,539,426
	19,571	32,202	24,866	16,258	17,661	32,780	285,043
	4,969	27,184	15,200	(33,670)	15,253	27,905	242,652
	31,256	28,735	29,776	28,576	24,932	26,721	232,357
	46,429	52,913	49,340	20,160	23,447	44,894	390,383
	6,658	6,898	6,959	6,901	6,259	6,599	57,383
	¥ 693,918	¥ 764,420	¥ 725,320	¥ 664,801	¥ 658,140	¥ 698,130	\$ 6,070,696
	254,870	262,932	247,742	241,483	246,400	264,512	2,300,105
	367,399	393,818	386,541	358,682	355,728	380,281	3,306,791
	86,025	103,836	112,992	96,485	103,577	117,935	1,025,522
	101,997	120,661	112,005	100,479	103,687	96,823	841,939
	509,564	543,789	521,548	477,155	476,920	499,743	4,345,591
	¥ 48,261	¥ 46,160	¥ 52,002	¥ 21,637	¥ 47,862	¥ 69,882	\$ 607,669
	(36,139)	(68,644)	(19,551)	(14,317)	(19,760)	(31,755)	(276,130)
	(17,624)	9,797	(28,503)	(21,976)	(7,739)	(29,178)	(253,721)
	126,167	113,835	116,249	100,977	121,215	134,723	1,171,504
	¥ 49.95	¥ 273.29	¥ 154.26	¥ (348.50)	¥ 157.84	¥ 290.98	\$ 2.53
	5,069.60	5,416.93	5,346.03	4,885.50	4,886.10	5,321.77	46.28
	80.00	90.00	100.00	100.00	100.00	110.00	0.96
	8.2	11.4	8.3	6.3	7.3	11.2	
	72.7	70.5	71.2	71.0	71.7	70.9	
	1.0	5.2	2.9	(6.8)	3.2	5.8	

5. Capital expenditures for FY2014/12 were calculated based on the period from April 1, 2014 to December 31, 2014 for the Company and its domestic consolidated subsidiaries and the period from January 1, 2014 to December 31, 2014 for the Company's overseas consolidated subsidiaries.

6. 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.

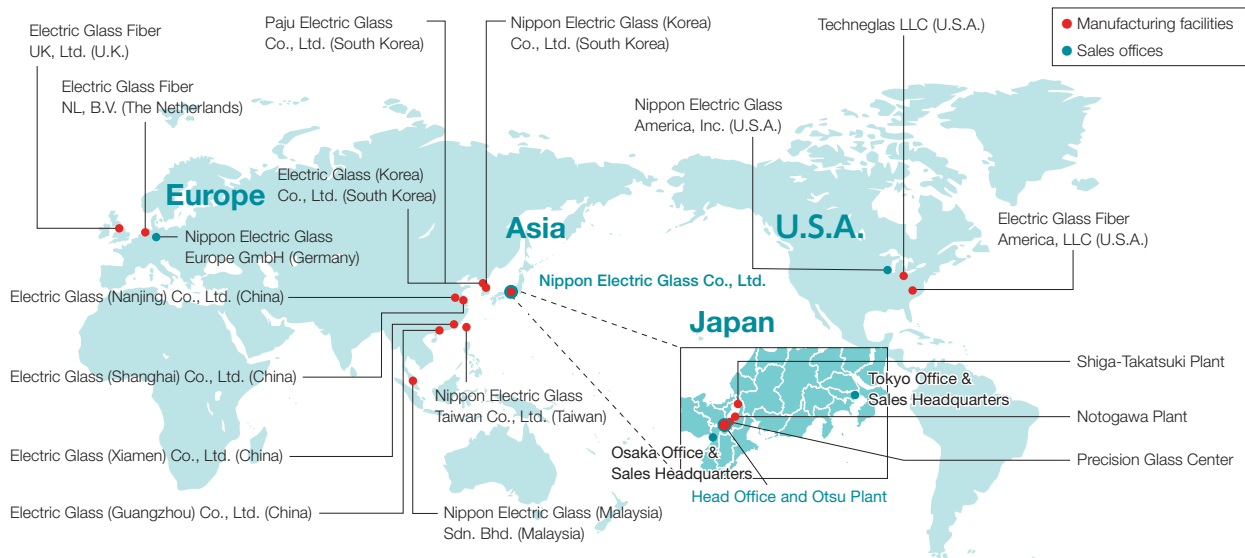
7. The Company and its consolidated subsidiaries have applied the "Partial Amendments to Accounting Standard for Tax Effect Accounting" (Accounting Standards Board of Japan (ASBJ) Statement No. 28, February 16, 2018) from the beginning of the fiscal year ended December 31, 2019. Accordingly, total assets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

# Corporate Information

## Corporate Profile

<b>Founded</b>	December 1, 1949	<b>Plants (in Japan)</b>	Otsu, Shiga-Takatsuki, Notogawa, Precision Glass Center
<b>Company Name</b>	Nippon Electric Glass Co., Ltd.	<b>Capital</b>	32,155 million yen
<b>Head Office</b>	7-1, Seiran 2-chome, Otsu, Shiga 520-8639, Japan Tel: +81-77-537-1700 Fax: +81-77-534-4967	<b>Number of Employees</b>	6,251 (consolidated, as of December 31, 2021)
<b>Sales Headquarters (Osaka)</b>	10F, Sumitomo Seimei Shin-Osaka Kita Bldg., 1-14, Miyahara 4-chome, Yodogawa-ku, Osaka 532-0003, Japan Tel: +81-6-6399-2711 Fax: +81-6-6399-2731	<b>Stock Exchange Listings</b>	Tokyo Stock Exchange (Prime Market)
<b>(Tokyo)</b>	9F, Shinagawa Grand Central Tower, 16-4, Konan 2-chome, Minato-ku, Tokyo 108-0075, Japan Tel: +81-3-5460-2510 Fax: +81-3-5460-2525	<b>Stock Code</b>	5214
		<b>Fiscal Year</b>	January 1 to December 31 of each year
		<b>Ordinary General Meeting of Shareholders</b>	Held each year in March
		<b>Transfer Agent for Common Stock</b>	Sumitomo Mitsui Trust Bank, Limited

## Global Operations

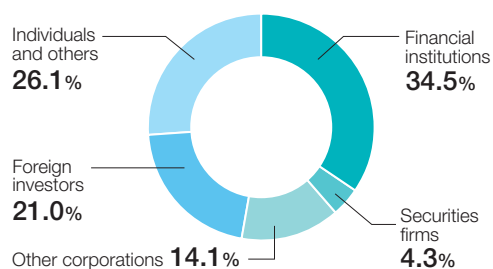


## Stock Information (as of December 31, 2021)

### 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	30,718

### Distribution of Shares by Shareholder Type

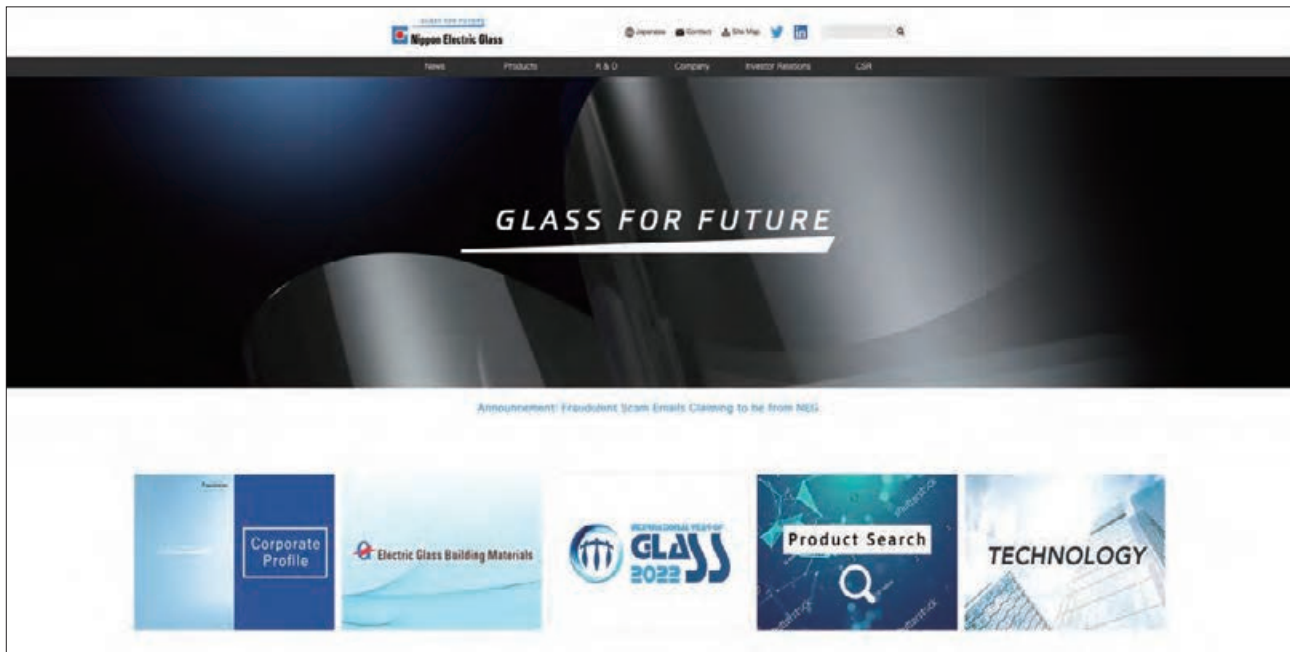


### Major Shareholders

Shareholder	Number of shares held (thousands of shares)	Shareholding ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	15,399	16.6
NIPRO CORPORATION	9,657	10.4
Custody Bank of Japan, Ltd. (Trust Account)	4,839	5.2
THE BANK OF NEW YORK MELLON 140051	2,204	2.4
THE SHIGA BANK, LTD.	1,617	1.7
Keimitsu Kin	1,470	1.6
STATE STREET BANK AND TRUST COMPANY 505001	1,384	1.5
SMBC Nikko Securities Inc.	1,374	1.5
JPMorgan Securities Japan Co., Ltd.	1,317	1.4
JAPAN SECURITIES FINANCE CO., LTD.	1,146	1.2

Notes: 1. The Company holds 6,495,982 treasury shares, and these are excluded from the major shareholders indicated above.  
2. The ratio of shareholding is calculated by excluding treasury stock.

## Web Directory



### ● Company

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

- Top Message
- Corporate Philosophy
- Corporate Governance
- Locations



### ● CSR

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

- Our Way of Thinking on CSR
- The three priority themes and main activities of CSR



### ● Investor Relations

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

- Financial Highlights
- IR Calendar
- IR Library
- Stock Information



## 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 2021 (January 2021 to December 2021). Some qualitative information regarding fiscal 2022 has also been included in this report.

### Publication, Next Scheduled Publication

Issued in May 2022. Next scheduled issue in May 2023.

### Editorial Guidelines

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

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

### 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.



*GLASS FOR FUTURE*



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

7-1, Seiran 2-chome, Otsu, Shiga 520-8639, Japan  
TEL: (81) 77-537-1700 FAX: (81) 77-534-4967



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