

GLASS FOR FUTURE



Nippon Electric Glass



**Integrated
Report
2020**

For the year ended December 31, 2020

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.

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.

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

GLASS FOR FUTURE

Our vision

The world's leading manufacturer of special glass

Our goal is to become the world's leading manufacturer of special glass, with the best talent, the best technology, and the best creative manufacturing ability. At the same time, we strive to run our Company in a way that inspires pride among our workers and enables us to make a genuine contribution to the community. The way we see it, creative manufacturing is achieved through state-of-the-art technological development, the highest quality standards, efficient production, and a steady supply of products, all underpinned by a fundamental dedication to environmental sustainability.

Our values

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.

Editorial Policy

Organizations Covered

The Nippon Electric Glass Group's 11 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 2020 (January 2020 to December 2020). Some qualitative information regarding fiscal 2021 has also been included in this report.

Publication, Next Scheduled Publication

Issued in May 2021. Next scheduled issue in May 2022.

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.

Financial & Corporate Information

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Message from the Chairman

Our Vision

Focused on becoming the world's leading manufacturer of special glass

In 2020, after the WHO revealed the emergence of the COVID-19 virus, individual countries were delayed in responding, resulting in the widening spread of the pandemic. The subsequent imposition of lockdowns in an effort to contain the pandemic led to a widespread decline in economic activity. The past year has been characterized by instability as society has alternated between periods of lockdown and periods of economic activity.

In the first half of 2020, our Company, as a supplier of glass products, was also deeply affected by the emergence of the COVID-19 pandemic. Soon after, however, demand for glass, a product essential to the functioning of society, remained strong. In response to this situation, our Group focused on maintaining our planned levels of production despite the difficulties posed by the pandemic.

This effort was supported by our strong company-wide commitment not to allow COVID-19 to impact the sites where we continuously melt glass at a minimum temperature of 1,000°C. In addition, we opened a new manufacturing facility for glass tubing for pharmaceutical and medical use, for which demand has remained quite high, in Malaysia, a country that had also suffered significant impacts from the COVID-19 pandemic. We were fortunate that our productivity in manufacturing display substrate glass, another product that enjoyed strong demand, exceeded our expectations.

We have the resilience to demonstrate our abilities without submitting to the crisis presented by the COVID-19 pandemic. We developed this fortitude by overcoming the many hardships we have encountered since our founding.

One of the biggest crises in our corporate history was the flooding of our Notogawa Plant in 1990. The embankments of the Echi River, which borders the plant site, were breached one night at 1:30 a.m., and our plant was severely damaged by the floodwaters. Before the water had even subsided, our president, supported on each arm by colleagues, entered the premises. By 5:00 a.m. he had established a disaster-response headquarters and launched early recovery efforts. With a strong desire to minimize inconvenience to customers, our employees fired the furnace that evening after a nonstop effort. We will never forget the joy and relief we experienced by overcoming that almost insurmountable challenge.

By the fourth day we had restarted the press forming operation to produce glass for cathode ray tubes, and by the fifth day we had started spinning glass fiber. It took several more days to return fully to normal, but our customers praised our efforts as a remarkable recovery effort, and the sense of accomplishment we felt at that time remains deeply imprinted in our DNA.

I would also like to take this opportunity to express my heartfelt appreciation and respect to all the medical professionals who have remained so dedicated to the battle against COVID-19. We are pleased to have been able to contribute to their efforts by providing a large amount of relief supplies.

Looking ahead, we recognize that our greatest mission is to continue supplying the glass products on which society depends. We intend to demonstrate our strengths at overcoming all adversity, even in midst of the pandemic, as we continue to focus on our goal of becoming the world's leading manufacturer of special glass.

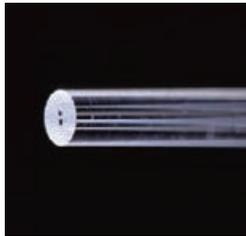


Masayuki Arioka
Chairman of the Board



Business and Product Development

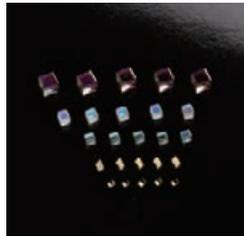
Our two business areas are: Electronics and Information Technology, and Performance Materials and Others. In Electronics and Information Technology, our businesses relate to either displays or optical and electronic devices. In Performance Materials and Others, our businesses relate to either glass fiber or medical care, heat resistance, or building materials. Our glass products are used in wide range of fields in both household and industrial applications.



Glass for optical communications
Glass capillaries and ferrules



Glass lens units for optical communications



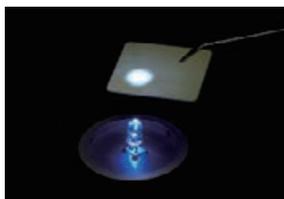
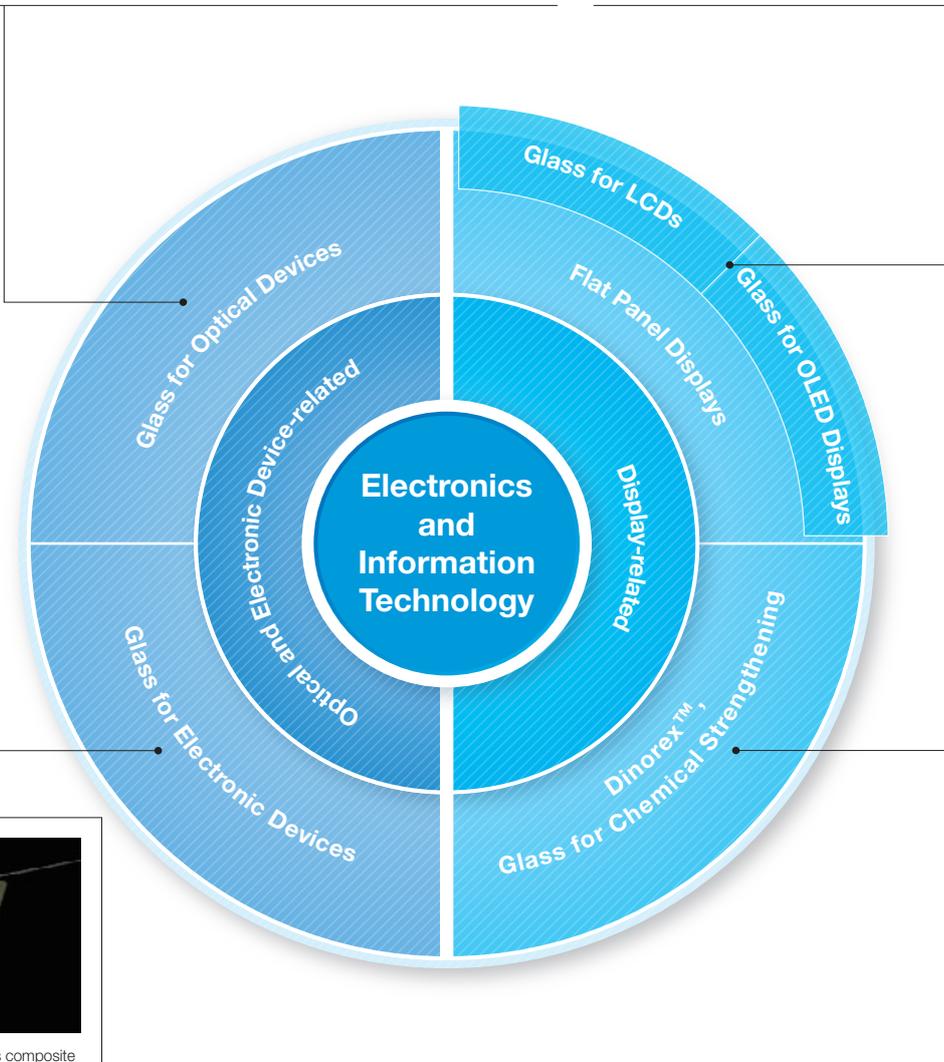
Micro prisms



G-Leaf™, ultra-thin glass



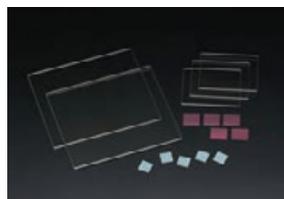
Glass substrate for LCDs and OLED displays



Lumiphous™, phosphor-glass composite



Glass tubing for miniature electronic parts



Cover glass for image sensors



Powder glass



Dinorex™, glass for chemical strengthening

Total

Net sales

242.9 billion yen

Electronics and Information Technology

Net sales

136.2 billion yen

Percentage of sales

56%

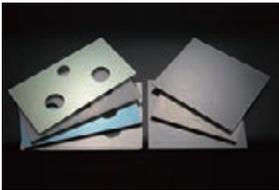
Performance Materials and Others

Net sales

106.7 billion yen

Percentage of sales

44%



StellaShine™, super heat-resistant glass-ceramics for cooking appliance top plates



Neoceram, super heat-resistant glass-ceramics



LX Premium, radiation shielding glass



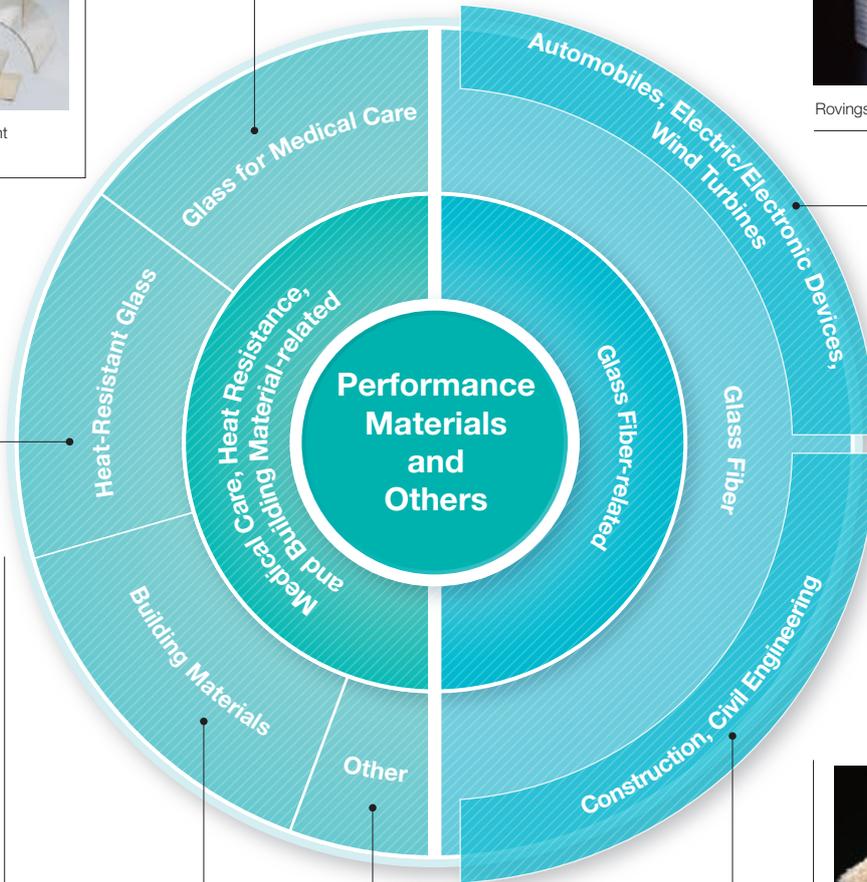
Glass tubing for pharmaceutical and medical use



Chopped strands for high-function plastics



Rovings for reinforced plastics



- Lamion™, ultra-thin glass laminated on resin
- Invisible Glass™, ultra-low reflection glass



FireLite™, fire-rated glass



Neopariés™, glass-ceramic building material



Glass blocks

- Glass for lighting
- Glass for thermos flasks
- Glassmaking machinery



ARG Fiber chopped strands



Wet chops for roofing



ARG Fiber net

Global Operations

Our business is global, aimed at markets around the world. We have manufacturing facilities in each major region to provide responsive shipment, service, and product development. This strategy also reduces risks involving such factors as material procurement, exchange fluctuations, geopolitics, and natural disasters. We also maintain close connections among manufacturing centers to ensure the stable supply of products.

- Manufacturing facilities
- Sales offices



Countries with operations

9

Number of affiliates

26

Percentage of sales outside Japan

84%

Techneglas LLC (U.S.A.)



Electric Glass Fiber America, LLC (U.S.A.)



Nippon Electric Glass
America, Inc. (U.S.A.)



U.S.A.

Japan

Shiga-Takatsuki Plant



Notogawa Plant



Tokyo Office &
Sales Headquarters



Osaka Office
& Sales
Headquarters

Head Office and Otsu Plant



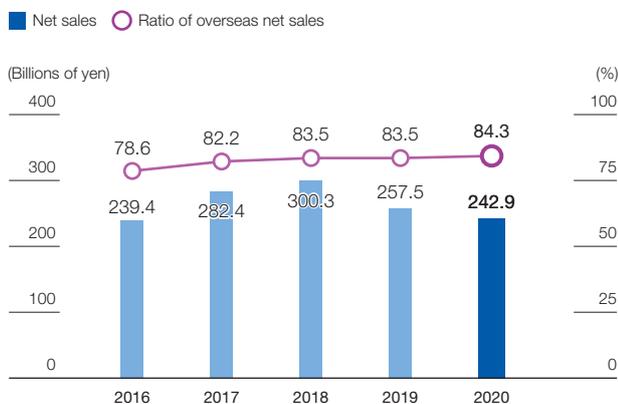
Precision Glass Center



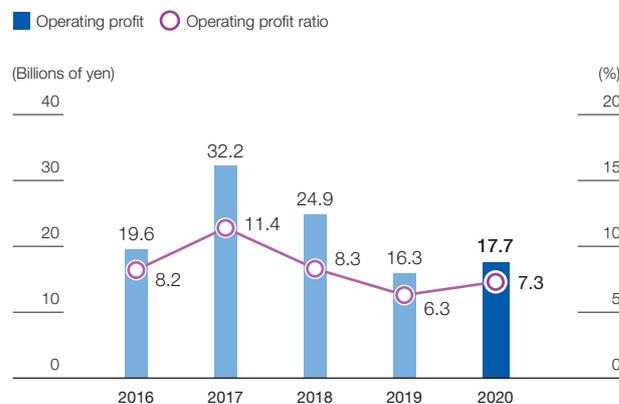
Financial and Non-financial Highlights

Financial Highlights (Consolidated)

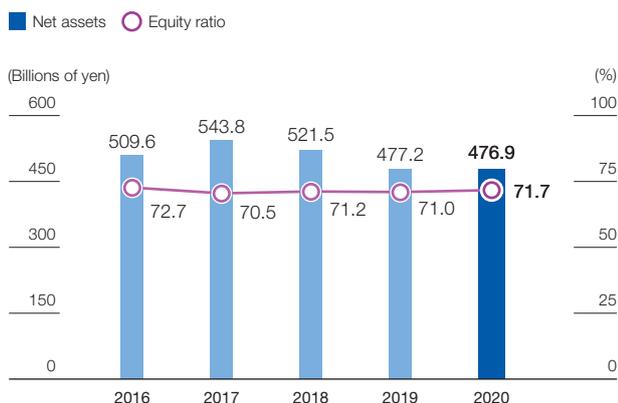
Net Sales, Ratio of Overseas Net Sales



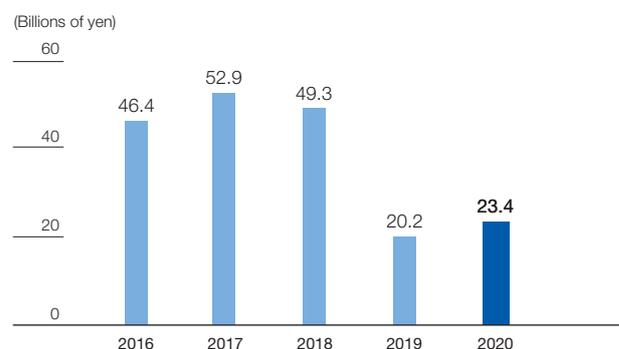
Operating Profit, Operating Profit Ratio



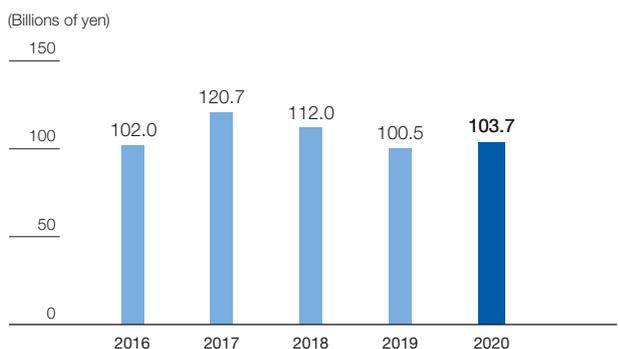
Net Assets, Equity Ratio



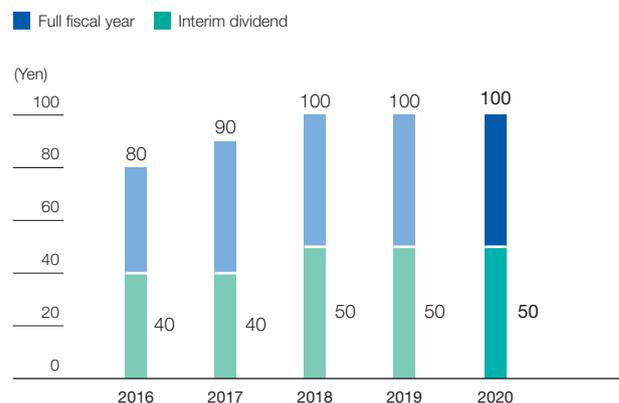
Capital Expenditures



Interest-bearing Debt



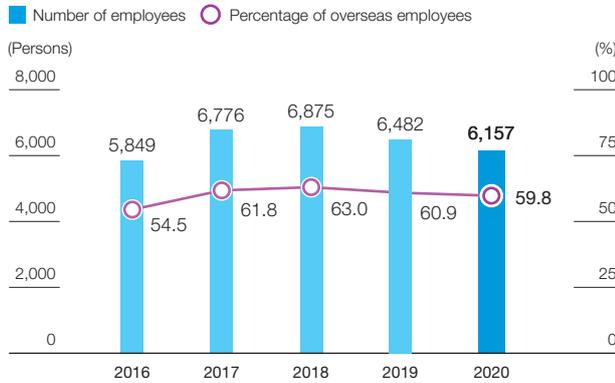
Cash Dividends per Share¹



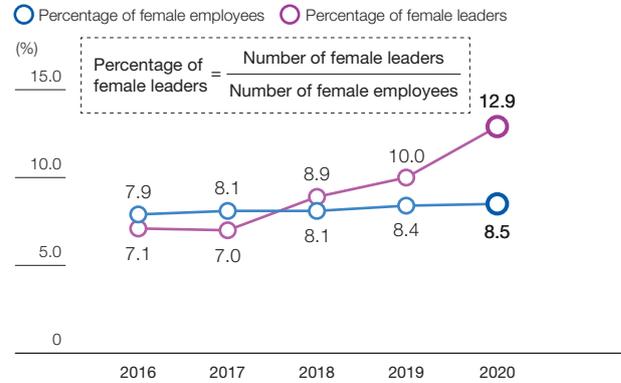
¹Per share of common stock amounts are retroactively adjusted for subsequent stock consolidation. On July 1, 2017, common shares were consolidated at a ratio of 5 to 1 based on the number of shares held by shareholders of record as of June 30, 2017.

Non-financial Highlights

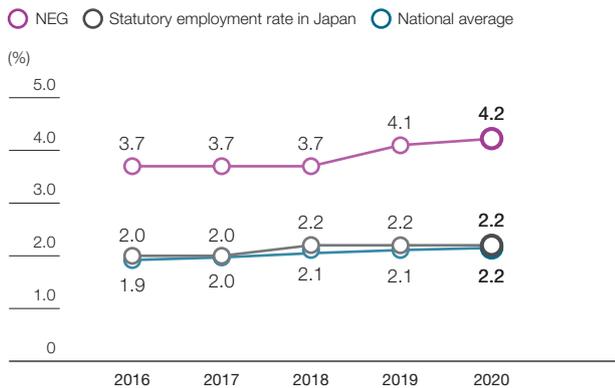
Number of Employees, Percentage of Overseas Employees (consolidated)



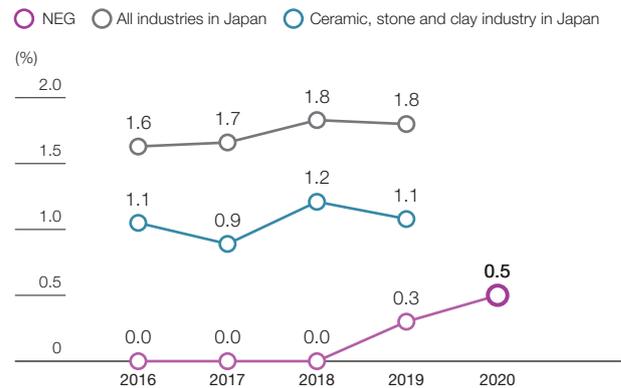
Percentage of Female Employees and Female Leaders (NEG)²



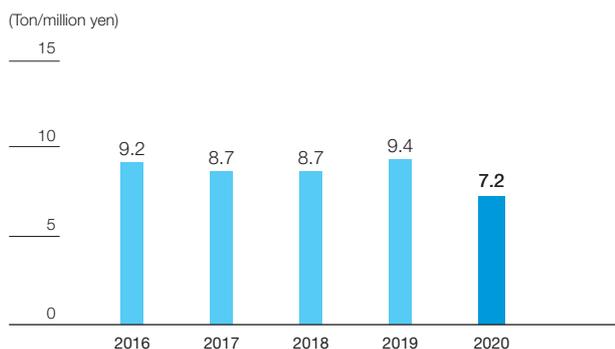
Percentage of Employees with Disabilities (NEG and consolidated subsidiaries in Japan)



Industrial Accident Frequency Rate (NEG)³



CO₂ Emissions Intensity (to consolidated sales)



Water Intake / Waste Water Intensity (to consolidated sales)

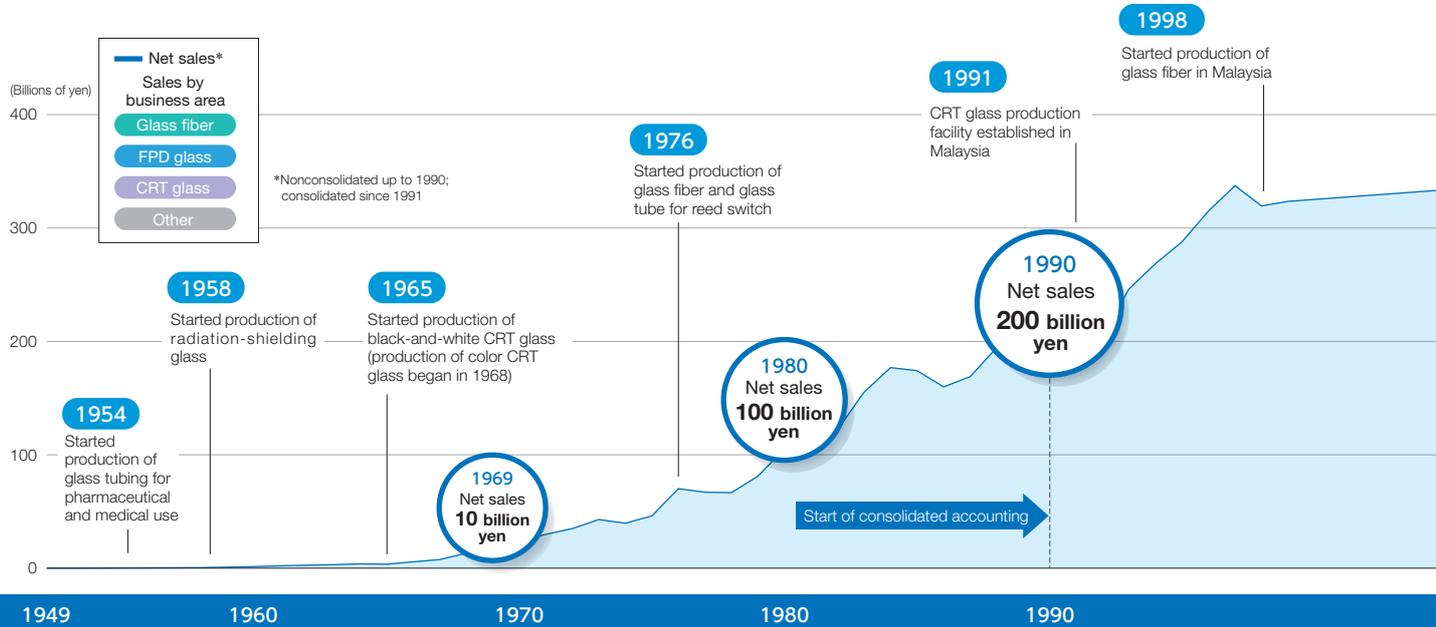


²A female leader is a female employee who oversees and manages subordinates.

³Aggregation 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

The Transformations and Advances of Nippon Electric Glass

Nippon Electric Glass (NEG) was established in 1949 in the chaotic aftermath of the Second World War in Otsu, Shiga Prefecture, with a total of some 90 employees. The Company has evolved to match the needs of the times, developing glass products that contribute to the betterment of people's lives and society's advancement. We will continue working to tap into the unlimited possibilities of glass and create new value for society through creative, advanced manufacturing.



1949-1989

From Establishment to Creating NEG's Foundations

- Social Trends**
- Continuing growth of the Japanese economy and rise in living standards
 - Widespread adoption of CRT TVs and other household appliances and automobiles
 - International expansion of Japanese manufacturers in electrical products, automobiles, semiconductors, etc.

Transformational Shift

Enlarging the scale of our business by applying our unique technologies to become a special glass general 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.

1990-2010

The Age of Overseas Development

- Social Trends**
- Economic stagnation in Japan caused by the collapse of the economic bubble
 - Widespread adoption of the Internet and ICT equipment advances
 - Adoption of flat-panel TVs and other digital devices

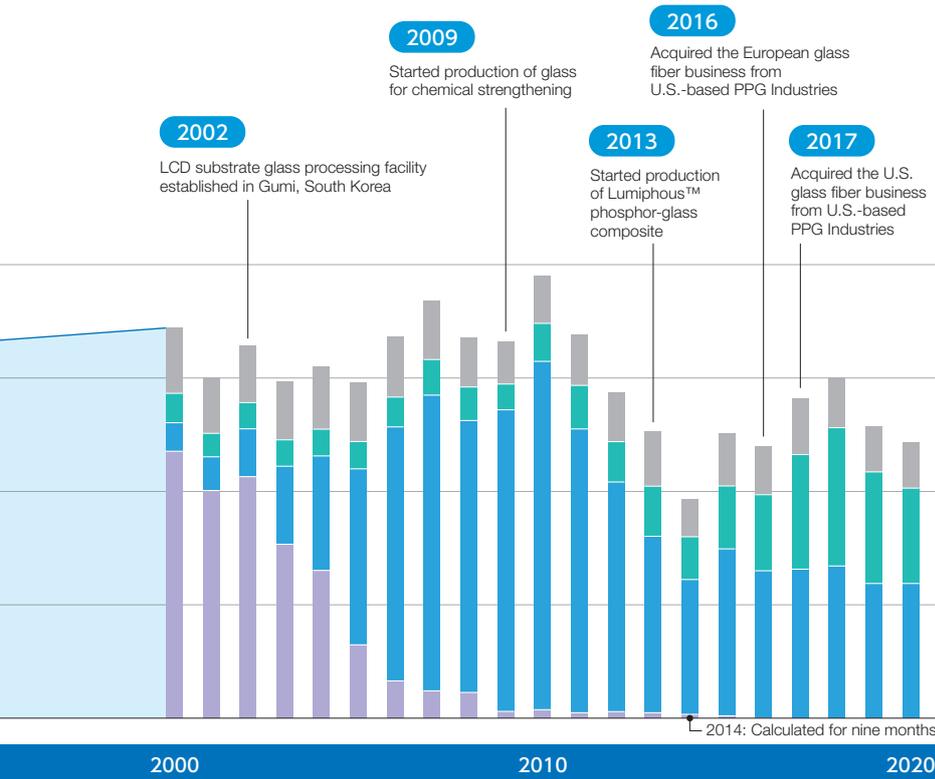
Transformational Shift

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. In 2000 we started producing substrate glass for LCDs using an overflow process. We were able to respond to needs for larger substrates, higher quality, and the ever-advancing LCD market.

Technological Advances

Year	Technological Advance
1951	Automated production of glass tubing using the Danner process
1974	All-electric melting furnaces with no fuel-derived CO ₂ emissions brought online
1993	Japan's first oxy-fuel firing furnaces are brought online
2000	Production of LCD substrate glass by applying the overflow process

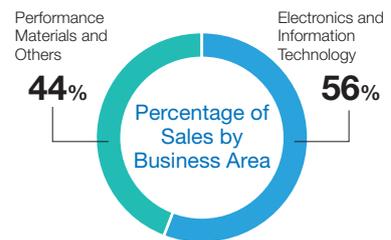


2020

[Net sales] **242.9** billion yen

[Operating profit] **17.7** billion yen

[Number of acquired patents] **2,618**



2011-2020
Reorganizing Our Business Portfolio for a New Age

- Social Trends
- Widespread adoption of smartphones and tablet computers
 - Advancement of digital platforms
 - Heightening awareness of environmental conservation

Transformational Shift
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 FPD 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).



2008
Roll-to-roll process achieved for ultra-thin (50 μm) sheet glass

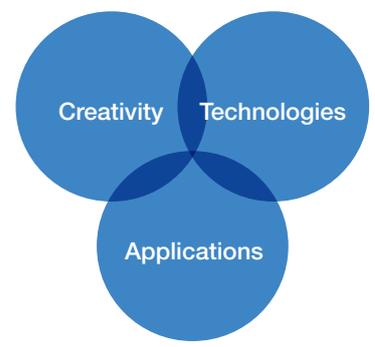


2019
Establishment of an innovative manufacturing process in LCD glass

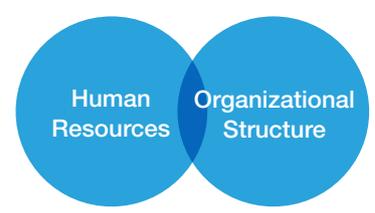
Strengths Built at Nippon Electric Glass

Our strengths are: product development based on cutting-edge core technologies and proprietary production technologies—combined with our corporate ethos (simplicity and fortitude) and open-minded corporate culture.

Manufacturing Strength

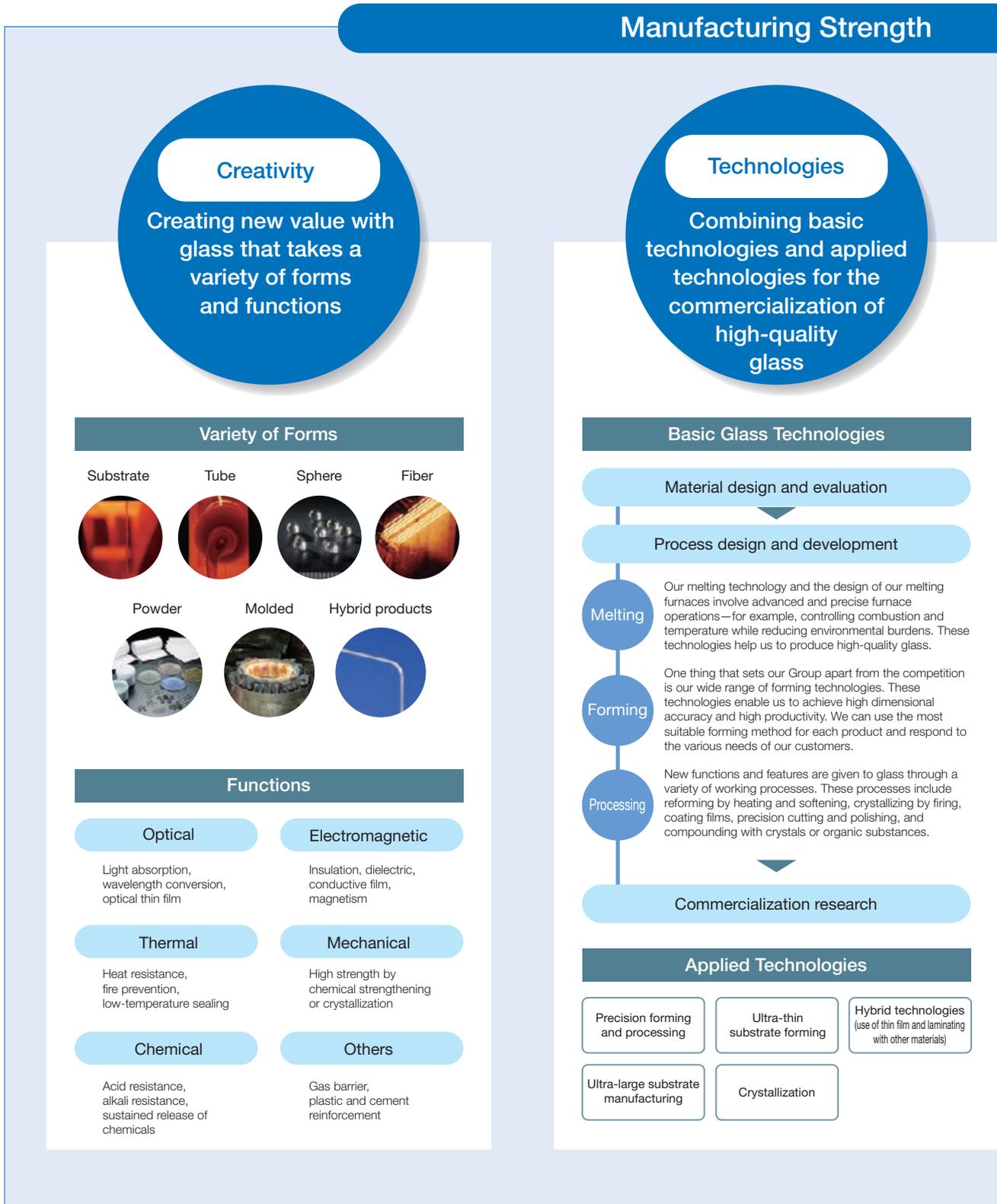


Solutions Capability



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.



Applications

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

Expansion and Reinforcement Areas



Automotive and Transportation

- Lightweight materials
- Vehicle lighting
- Displays
- Self-driving vehicles
- Vehicle cameras
- Electronic devices



ICT and Semiconductors

- High-speed, large-capacity optical communication devices (5G compatible)
- Next-generation semiconductors (compact and high definition, advanced functions)



Medical Care

- Advanced pharmaceutical containers
- Advanced medical equipment and facilities



Displays

- Next-generation displays (high definition, thin and lightweight, flexibility)

Strategic Development Areas



Lighting

- Next-generation lighting (energy saving, high luminance, high output)



Energy

- Renewable-energy systems
- Rechargeable batteries



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

Solutions Capability

Human Resources and Organizational Structure

Responding rapidly with solutions for customers through organizational and employee competence

Various Human Resource Development Programs

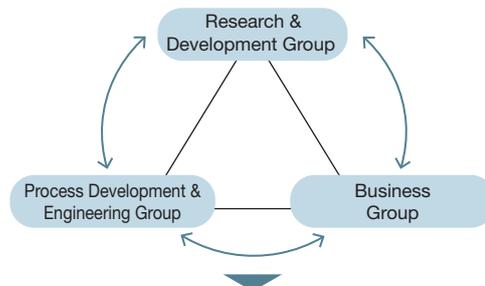
Promoting multi-faceted opportunities for skill improvement, plus on-the-job training



Developing personnel capable of world-class performance in every challenge

Supporting Seed Technologies and Responding to Needs Organizationally

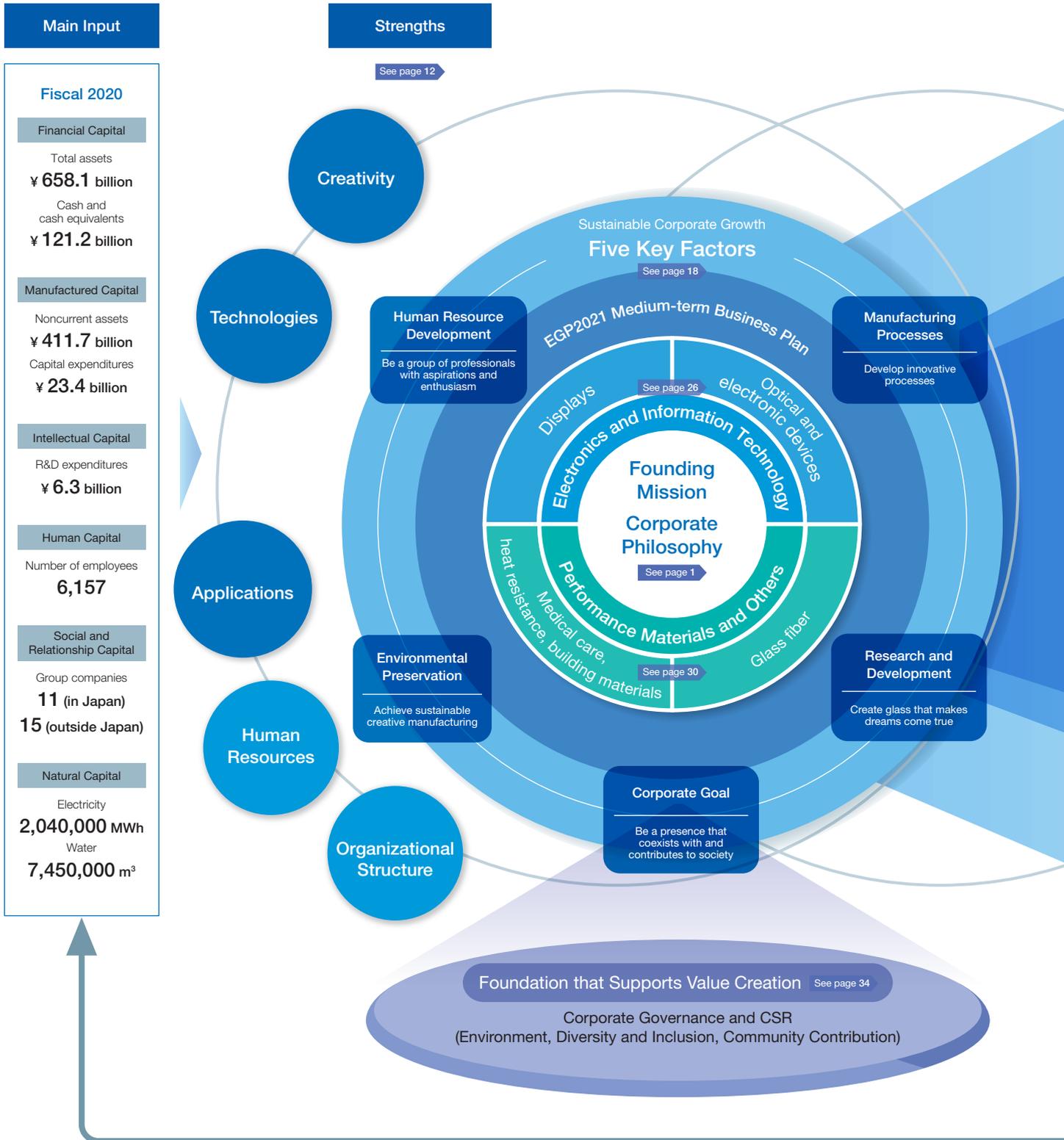
Building a new organizational structure to facilitate smoothly integrated information sharing



Three-pronged development system will promote product development for markets 5 and 10 years ahead

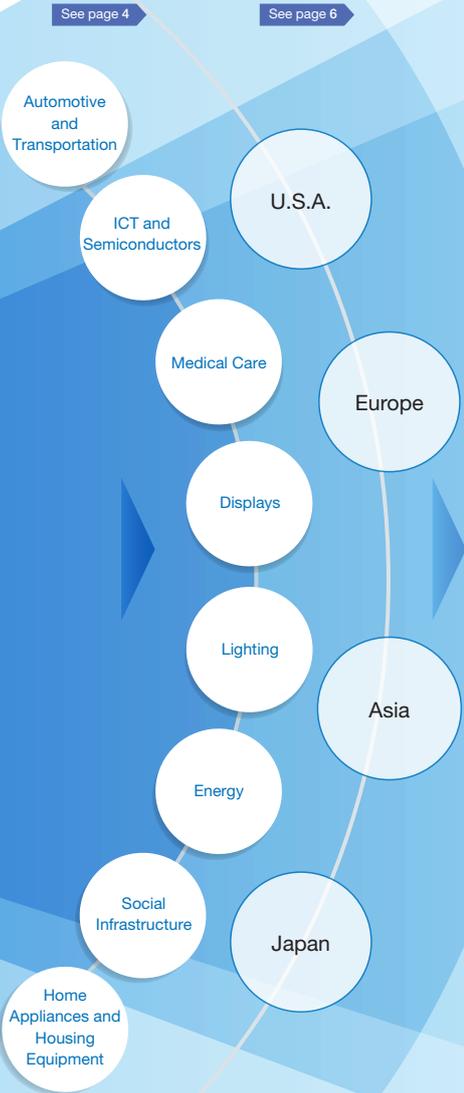
Value Creating Process

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





Product Areas **Global Operations**



Main Output

Fiscal 2020

Financial Results

Net sales
¥ 242.9 billion

Operating profit
¥ 17.7 billion

Cash dividends
¥ 100 /share per year (DOE 2%)

Intellectual Property

Number of acquired patents
2,618

Diversity and Inclusion

Percentage of employees with disabilities
4.2%

Health and Productivity Management Outstanding Organization
Certified 3 years in a row

Community Contribution

Number of participants in community activities
Approx. 300 people

Environment

Sales of environmentally friendly products
Approx. ¥ 68 billion

Creation of Social Value

Reduction of environmental impact

Utilizing natural energy

Innovations in ICT

Advancement in medical care

Improvements in safety and comfort of daily life

Advancement in transportation

Creating a robust and durable social infrastructure

A fair work environment and human resource training to develop tomorrow's leaders

Meeting society's challenges

Sustainable Development Goals (SDGs)

The world's leading manufacturer of special glass

The Value Chain and Sustainable Development Goals

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.



- 5**
- Helping women reach their full potential
 - Support for raising the next generation

- 8**
- Diversity initiatives
 - Contribution to cutting-edge science and technology
 - Occupational health and safety activities, work-style reforms

- 16**
- Formulation and dissemination of our corporate philosophy structure

- 17**
- Collaboration with Shiga Prefecture
 - Endowment course at the University of Shiga Prefecture



- 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

- 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

Note: See page 51 for details on our environmentally friendly products.

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

- 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



Sales

Product use

Final
product
disposal



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

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

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

- 16**
- Thorough compliance
 - Human rights initiatives



- 12**
- Recycling packaging

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



- 12**
- Reuse of waste glass

Message from the President



M. MATSUMOTO

Motoharu Matsumoto
President

We remain committed to addressing a range of social issues, including preservation of the global environment, while pursuing the sustainable growth of our business.

A year of contending with the COVID-19 pandemic

Even as we implemented comprehensive infection-control protocols, we focused on ensuring a stable supply of products.

Fiscal 2020 was a year in which we witnessed remarkable shifts in the economic environment due to the effects of the COVID-19 pandemic.

Upon receiving news of the spread of the virus from China, where our business is based, we implemented our Business Continuity Plan and immediately made it our top priority to protect the health and safety of our employees and their families as well as our customers, business partners, and other stakeholders. We also undertook a focused effort to control the spread of the infection.

Specifically, we set up a disaster-response headquarters within the company in anticipation of an increase in telecommuting due to restrictions on workplace attendance. By the first half of February, we were already expanding our network capabilities and securing mobile tools for our employees. At the same time, we thoroughly managed risk by reviewing infection control guidelines as needed in response to changes in the circumstances related to virus transmission. Although more than 80% of our sales are to Asia, Europe, and North America, we were subject to considerable restrictions on business execution, such as having to reduce international business travel almost to zero due to clampdowns on international travel. To accommodate this situation, we responded flexibly in each circumstance by resorting to web conferencing, providing online guidance to various sites, and utilizing local personnel for construction projects outside Japan.

In addition to our efforts to prevent the outbreak of in-house clusters of infection that would have an impact on production, we also undertook early procurement of raw materials and components and diversified suppliers across our supply chain. Fortunately, as of this writing, we have experienced no impact on production due to the impact from virus infections.

In preparation for the risk of financial market instability caused

by the COVID-19 pandemic, we increased our cash reserves in March 2020 as part of our response to the crisis. In addition, we have ensured a sound financial footing by flexibly implementing measures such as operational adjustments, cost reductions, and prioritization of capital expenditures in order to respond to the anticipated sharp decline in demand.

Initiatives and achievements for fiscal 2020

Improving productivity by adopting technological innovations in our manufacturing processes

Looking to our financial performance for fiscal 2020, although sales fell sharply in the second quarter due to the slowdown arising from the COVID-19 pandemic, we witnessed a remarkable recovery trend beginning in the third quarter. In retrospect, the business environment in which we operate did not plummet throughout the year as we had initially feared.

In the display glass business, sales of displays remained strong against the backdrop of high demand arising from increased telework and the home-centered “nesting” trend, and we posted record-high shipments. On the other hand, we very much regret the temporary inconvenience to our customers at the end of last year arising from delayed shipments due to an unplanned power outage at our plant in Japan. The affected production line has already been restored and production is back on track. As for our glass fiber business, although demand for automobile parts and wind turbine blades was sluggish in the first half of the fiscal year, it recovered rapidly in the second half and continues to boom. In addition, while demand for glass tubing for pharmaceutical and medical use remained robust, it was further boosted by surging demand for pharmaceutical containers for vaccines of COVID-19, with the result that our operations are now running at full capacity. In the latter half of last year, we started operation of a new manufacturing facility for glass tubing for pharmaceutical and medical use in Malaysia, and we continue to work hard to meet the growing demand.

Message from the President

Consolidated net sales totaled 242.9 billion yen, which represents a decline relative to the preceding fiscal year, but operating profit was 17.7 billion yen, representing a year-on-year increase partly attributable to a significant improvement in productivity, mainly in the production of display glass.



Fiscal 2021 earnings forecast

All our business divisions are expected to exceed the results of the preceding fiscal year.

The market for display glass continues to be favorable, and we anticipate that sales of glass for optical and electronic devices, glass fiber for automobile applications and wind turbine blades, and glass tubing for pharmaceutical and medical use will also remain strong. Both sales and operating profit are expected to exceed those of the preceding fiscal year.

Looking to the display business, we recognize the importance of expanding the production capacity of our facilities in Xiamen and increasing production and sales of 10.5-generation substrate glass in order to accommodate the Chinese market, which represents the main battlefield. As for the glass fiber business segment, applications related to automobile parts, wind turbine blades, and housing applications are all expected to increase. With regard to automobile parts applications, the shift to electric vehicles is progressing against the backdrop of heightened environmental awareness, and inquiries about functional parts have been increasing. As the importance of developing glass fiber suitable for new components and applications grows ever more important, we intend to fulfill market demand by focusing on the need for greater strength, increased thermal resistance, and additional weight reduction.

Our capital expenditures for the coming fiscal year are expected to total 60 billion yen. Going forward, we will continue to

invest in growth markets in a timely manner, with operating cash flow exceeding 50 billion yen and free cash flow remaining positive over the medium and long terms.

Regarding dividends, we have held to our policy of maintaining stable dividends over the long term by maintaining or increasing our dividend for more than 20 years without a single decrease or interruption. In fiscal 2021, we plan to pay a dividend of 100 yen per share, maintaining the same dividend as that of the previous fiscal year.

Outline of the EGP2021 Medium-term Business Plan

Basic Policy

Pursue further growth toward becoming the world's leading manufacturer of special glass

Slogan

Strong Growth—Raise Aspirations and Break through Walls

Growing our operations, our human resources, our technological foundation, and our developmental strengths.

Making "strong" corporate fundamentals our priority.

Priority Areas

(1) Research and development (2) Business strategies (3) Strategic investments (4) CSR

Performance Targets

Net sales ¥300 billion

- Electronics and Information Technology: ¥150 billion
- Performance Materials and Others: ¥150 billion

Operating profit ¥25 billion

Operating margin 8%

Review of EGP2021, our medium-term business plan

Accelerating efforts to achieve sustainable growth for the next generation

Fiscal 2021 marks the final year of EGP2021, our medium-term business plan. Although it can be difficult to achieve numerical targets regarding sales growth, we have been rewarded with positive results as a result of EGP2021. We believe we have achieved considerable progress in strengthening our basic technologies such as manufacturing process technology and product development, which symbolize the twin pillars of a manufacturing company. In particular, we have firmly established the innovative manufacturing process technologies we have been advancing in Japan, and we intend to extend these assets horizontally in the future. Moreover, this process will strengthen profitability by improving productivity and

is expected to reduce CO₂ emissions, thus contributing to the promotion of carbon neutrality in the years ahead.

Looking to product development, we are posting steady results in the areas of infrared transmitting glass used for night vision applications, deep UV transmitting glass used for sterilization equipment, and exceptionally safe all-solid-state sodium-ion rechargeable batteries. We will work closely with our Corporate Strategy Department and Marketing Department to commercialize these products successfully.

Formulating a new medium-term business plan

Protecting the global environment while improving our business performance

In formulating our next medium-term business plan, we believe we must not only aim for improved business performance, but also adopt initiatives that incorporate perspectives related to ESG (environmental, social, and governance issues) and the SDGs (sustainable development goals established by the UN). This approach must include addressing environmental issues with a commitment to sustainable growth over the medium and long term.

We have always been aware of the large environmental impact of the glass industry, so we have resolved to conduct our business operations with consideration for the residents of the communities in which we operate. With little regard for the cost, we have always adopted the latest environmental equipment, actively promoted the “3 Rs” (reduce, reuse and recycle), and incorporated environmental expertise and technologies. In addition, we have followed an environmental business plan that incorporates our operational management approach, and for more than two decades we have emphasized the need to reduce waste generation and water consumption. Notably, this year we have added energy management to our list of priorities.

In recent years, the global movement toward carbon neutrality has been accelerating. In the future, improving the power ratio of heat sources in order to reduce CO₂ emissions attributable to the manufacturing process is likely to become a pressing issue. With regard to our approach to reducing CO₂ emissions, we are preparing to announce specific targets as well as a schedule at the appropriate time.

We hold the view that highly efficient manufacturing is environmentally friendly manufacturing. Specifically, we believe

that ensuring high production efficiency and high quality in our manufacturing processes results in minimal consumption of raw materials, efficient fuel consumption, and reduced emissions of waste and CO₂, which together contribute to environmental conservation. Under our next medium-term business plan, we will focus our efforts on our priorities related to environmental conservation and the pursuit of profits through improved manufacturing processes.

Envisioning growth over the medium and long terms

Pursuing a role as the manufacturer of the industry's best glass and products that amaze the world

We have adopted the policy of fulfilling our corporate vision as the world's leading manufacturer of special glass. Though this may not qualify as a particularly flashy goal, we intend to become known as the manufacturer of the best glass products in the world. Likewise, even as we focus on developing products that meet the needs of society, we pledge to remain a company renowned for its devotion to customer satisfaction.

At the same time, we recognize that these objectives are completely reliant on the contributions of our human resources. While the COVID-19 pandemic has focused attention on a variety of new work styles, we will continue to consider innovative approaches to work in keeping with changing times. We will also strengthen our human resource foundation in order to support the sustainable growth of the Company with the aim of realizing a workplace where everyone can work and demonstrate their full potential with vigor. In this effort, we will remain aware of the need to support diversity, such as promoting the active participation of female employees, supporting the employment of foreign nationals, and expanding the employment of people with disabilities.

Since our founding, we have prided ourselves on our ability to operate with clear-eyed determination, never flinching in the face of adversity. As the business environment continues to shift dramatically, we will remain dedicated to producing the industry's best glass as well as products that amaze the world, all the while maintaining our contributions to society. We look forward to the continued support of our shareholders as we pursue these objectives.



Responding to COVID-19

The COVID-19 pandemic has had a significant impact on our daily lives. Under these circumstances, our Group has managed to maintain regular business operations while implementing steps to minimize the spread of the virus. Through this effort, we have afforded top priority to the health and safety of all stakeholders, including our employees and their families as well as our customers and business partners.

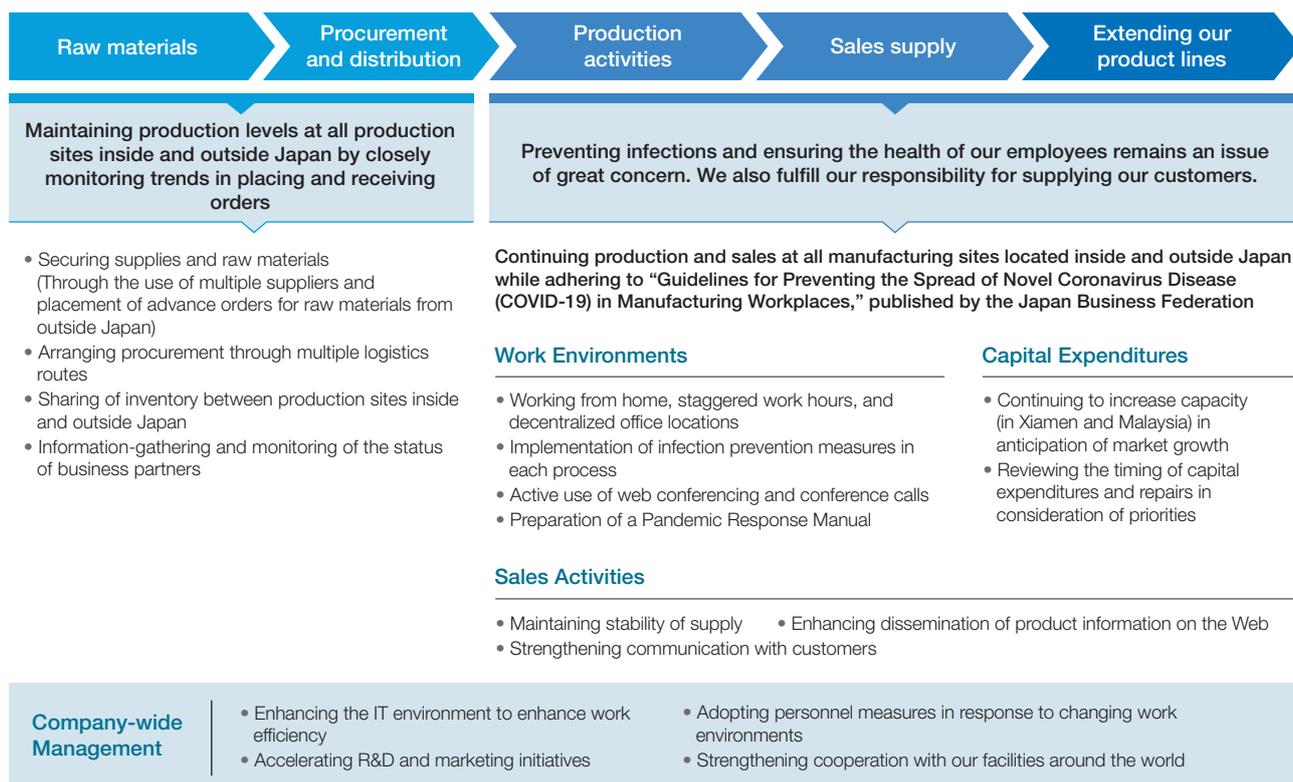
We have also taken the opportunity presented by this disruption to rethink our conventional approach to work while implementing measures to further improve our work efficiency. We continue to develop products intended to minimize infection as we increase production without slowing down our processes.

We pledge to maintain our current measures and will not let down our guard as we combat the spread of this infectious disease.

Our COVID-19 Policy Response



Initiatives Related to Our Business Operations



Impact on Specific Businesses (2020)

Electronics and Information Technology

Displays

- ▶ Rapid recovery in the second half of the year after bottoming out in the second quarter due to a temporary decline in customers' production
- ▶ Significant market expansion arising from the rise in telecommuting and the home-centered "nesting" trend

Electronic Components

- ▶ Gradual recovery in automotive demand after bottoming out in the third quarter
- ▶ Decreased demand for general-purpose products in the first half of the year
- ▶ Consistent strong demand for 5G and other communications infrastructure

Performance Materials and Others

Glass Fiber

- ▶ Although market conditions deteriorated in the first half of the year, the market for both automobile parts and wind turbines recovered sharply after hitting bottom in the second quarter.

Medical care, heat-resistant products, building materials

- ▶ Medical care: Strong demand across all countries
- ▶ Heat-resistant products: Gradual recovery as customers in the U.S.A. and Europe resumed operations
- ▶ Building materials: A cooling market due to a decreased number of housing starts in Japan

Contributing to the Community

We donated health and hygiene supplies through local government agencies.

Main donations	Japan	South Korea
	Masks 133,000 units	Masks 2,000 units
	Medical rubber gloves 75,000 units	



Products for the Medical Sector

Glass Tubing for Pharmaceutical and Medical Use

The glass tubing for pharmaceutical and medical use we produce exhibit excellent chemical resistance and workability. They are processed into ampoules and vials and are used as containers for pharmaceutical products, including containers for COVID-19 vaccines. Since our new facility in Malaysia started operation in October 2020, our production capacity has increased significantly.



Deep UV transmitting Glass

Deep ultraviolet radiation, which has a relatively short wavelength for the ultraviolet spectrum, has a bactericidal effect and serves to decompose organic substances. Lamps and LEDs that emit deep ultraviolet radiation are used in medical facilities and food processing plants. Special glass capable of efficiently transmitting deep UV radiation is used to protect the UV light source. Our glass is also incorporated into equipment used for sterilization of the novel coronavirus.



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

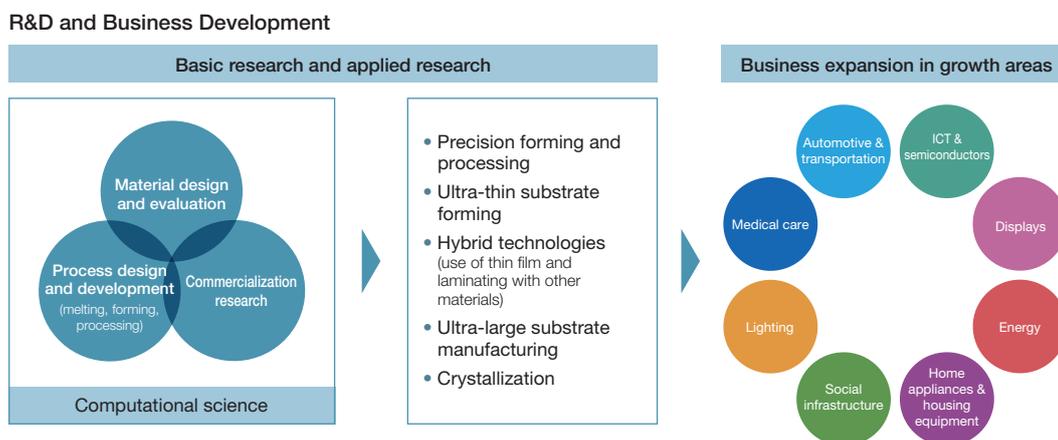
We pursue basic research encompassing material design and evaluation, process design and development, commercialization built on trial production and product refinement, and computational science, which includes ICT and AI-driven data analysis.

With this basic research we combine applied research in areas including precision forming and processing and ultra-thin substrate forming.

We aim to develop glass products that provide value for

society, as we focus on expanding business in growth areas such as automotive, ICT, medical care, and displays.

Under our EGP2021 Medium-term Business Plan, we are making research and development a top priority. By incorporating product, technology, and manufacturing processes into a single, integrated development structure, together with more robust marketing functions and other measures, we facilitate stronger collaboration among our different departments to create “glass that makes dreams come true.”



R&D Organization

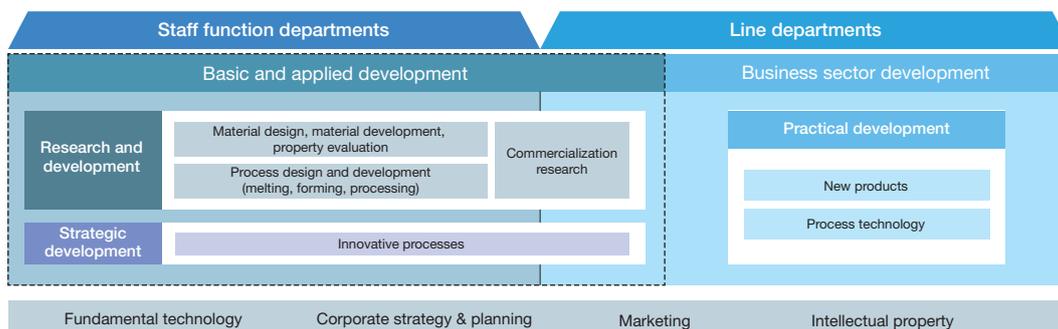
Our Research & Development Group and the Process Development & Engineering Group, as staff function departments, engage in R&D in the areas of material design and development, property evaluation, and process design and development. Meanwhile, our line departments carry out practical development such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

The staff function 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.

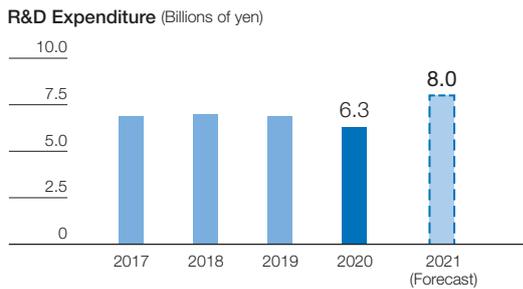
In conjunction with this, as a measure of our EGP2021 Medium-term Business Plan, our Research & Development Group, Process Development & Engineering Group, and Business Divisions responsible for commercialization of new products will construct an integrated development system and provide information and advice on sales strategies through a cross-sectional marketing organization.

Collaboration between Departments



R&D Investment

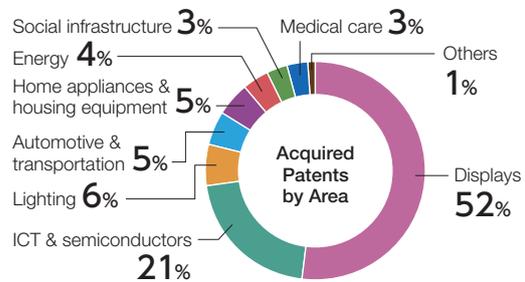
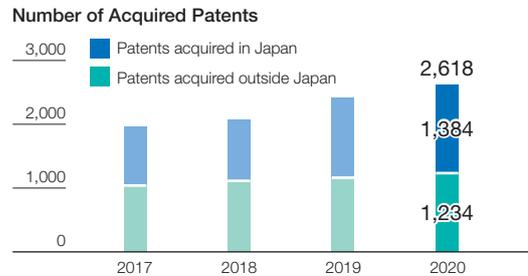
We are working tirelessly in R&D in order to realize our corporate philosophy: “We strive to build a brighter future for the world by uncovering the unlimited possibilities of glass for more advanced creative manufacturing.” We also aim to integrate and evolve our manufacturing processes and product development, and reflect the results in our management strategy in order to realize medium- and long-term growth. Our R&D expenditure was 6.3 billion yen in fiscal 2020. We will continue boosting our R&D activities.



Intellectual Property

At the Company, our approach to intellectual property is to pursue systematic synergy between glass manufacturing and glass product and process R&D in order to generate technological results that we

protect and utilize as intellectual property providing us with competitive advantages, which contribute to the development of the Company. And we are increasing the number of patents we hold in and outside Japan, focusing on key business areas and areas of future business development, so that we will have a network of patents to effectively support our business.



R&D News

New product

Announced February 4, 2020
Glass Beads Contributing to the Production of Translucent 3D Printed Models

Utilizing our expertise and years of experience in the material design of optical glass with our bead manufacturing technology, we have succeeded in developing micro glass beads that match the refractive index of the resins used for 3D printing. Typically employed for fashioning temporary teeth, this innovative material makes it possible to add a natural level of translucency to an artificial tooth while also improving the heat resistance and strength of the modeled product.



Sample printed with our innovative glass beads

Sample printed with commercially available glass beads

New product

Announced August 26, 2020
5G-Suitable Low-Temperature Co-fired Ceramic Material with the Industry's Lowest Loss Tangent

We have expanded our product line by developing a low-temperature co-fired ceramic (LTCC) material exhibiting a low loss tangent. This material is ideal for use in components incorporated into 5G communications infrastructure. We are developing three types of this new material featuring, respectively, low dielectric constant, high coefficient of thermal expansion, and high mechanical strength. All three types share the common feature of low loss tangent. This new material minimizes the transmission loss of 5G communications, thus contributing to more efficient communications.



R&D innovation

Announced June 12, 2020
Achieving Progress in the Development of an All-Solid-State Sodium-ion Rechargeable Battery

We have achieved a milestone in the development of an all-solid-state sodium-ion rechargeable battery, which we have been developing since 2017. As of this writing, we have achieved a practical level of performance by significantly reducing the electrical resistance inside the battery.

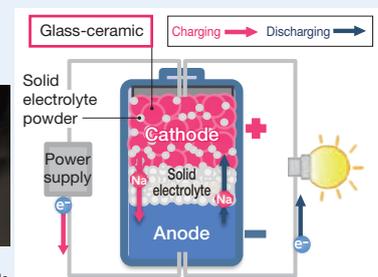
All-solid-state sodium-ion rechargeable batteries are expected to emerge as next-generation rechargeable batteries capable of solving the shortcomings of mainstream lithium-ion rechargeable batteries, notably product safety and instability in the sourcing of raw materials.

By using a solid electrolyte in the form of an inorganic oxide glass-ceramic for the cathode, we are developing a battery with a simplified structure that is capable of generating a high level of energy. We are

targeting a wide range of practical applications for this battery, from mobile devices to electric vehicles.



Operational test demonstrating that a practical level of performance is possible



Business Overview

Electronics and Information Technology



Display-related Business

Director and Senior Vice President,
Group General Manager of Display Glass Group

Tomonori Kano

Trend in Net Sales (Electronics & IT)



Main Products

[Display-related Business]

■ Glass for flat-panel displays (FPDs)

Manufactured by the overflow process, this glass substrate has an exceptionally smooth surface. It is used in displays such as flat-panel TVs and mobile 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.

[Optical and Electronic Device-related Business]

■ Glass for optical devices

We provide a variety of products that connect high-speed optical communication networks, including micro prisms, micro lens arrays, and micro capillaries.

■ Glass for electronic devices

A vast range of applications are available, including cover glass for image sensors and powder glass, glass paste, precision glass tubes, and phosphor-glass composite in the electronic components in home appliances, automobiles, industrial machinery, and the like.

The Business Environment

The display market expanded significantly in 2020 due to the spread of the COVID-19 pandemic, which resulted in increased telecommuting and a trend toward home-centered “nesting.” We believe this trend will continue in 2021. In the panel industry, we are witnessing the continued operation of South Korean panel manufacturers that had been scheduled for shutdowns. At the same time, Chinese panel manufacturers are continuing to start up plants for 8.5-generation and 10.5-generation panels. We are working to further improve productivity and increase production capacity in Xiamen, China in order to meet growing demand for 10.5-generation glass and other products.

Our Strengths

We use the overflow process to manufacture glass for flat panel displays (FPDs) as well as 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 up to the size of the 10.5 generation. We also manufacture ultra-thin glass G-Leaf™ with a maximum thickness of 200 μm that is flexible enough to be bent like a film, so we are developing applications for flexible devices.

In order to improve productivity, reduce energy consumption, and reduce CO₂ emissions, we have been developing innovative manufacturing process technologies. Going forward, we intend to enhance our competitiveness in terms of cost and quality by horizontally deploying these innovations. 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

- Expanding production and sales in the booming Chinese market while growing market share
- Expanding sales of ultra-thin glass as a cover glass for foldable devices and a substitute for resin films for displays
- Promoting the development of new products other than displays by applying our overflow technology to various other glass materials

Business Overview

In fiscal 2020, we were able to provide a stable supply of high-quality FPD glass products by improving productivity through innovative manufacturing process technology and by extending the service life of our equipment. Sales were impacted by our customers' reduced production levels in the second quarter (April–June 2020). However, the TV and IT-related display market recovered rapidly in the third quarter (July–September 2020), with shipments exceeding those of the previous fiscal year.

Shipments of glass for chemical strengthening decreased due to sluggish demand for smartphones and other products, but progress was achieved with increased adoption of in-vehicle displays. In addition, by applying our overflow technology, we have succeeded in developing Dinorex UTG™, a 25-μm (0.025 mm)

glass for chemical strengthening — the industry's thinnest — which has resulted in a durable foldable display.



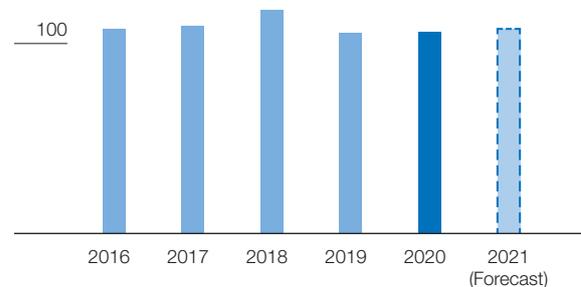
10.5-generation substrate glass

Outlook for Fiscal 2021

In order to ensure our production capacity is increased in fiscal 2021, we intend to make a third investment in Xiamen, China. We will also undertake horizontal expansion of our innovative manufacturing processes in order to continue competing on the basis of cost, quality, delivery, and service. These initiatives will enable us to meet this growing demand.

Net Sales of FPD Glass Business

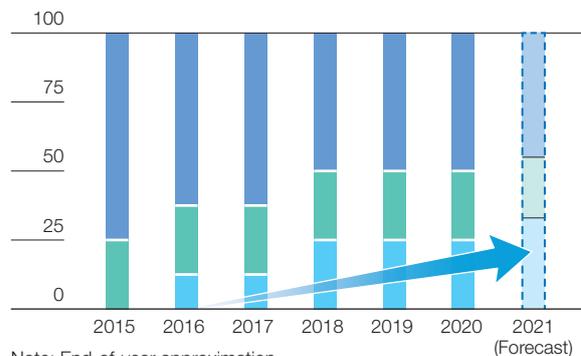
(Billions of yen)



Forming Capacity of FPD Glass

■ Japan ■ South Korea ■ China

(%)



Note: End-of-year approximation



Optical and Electronic Device-related Business

Vice President and Group General Manager of Electronic Products Group

Masahiro Kobayashi



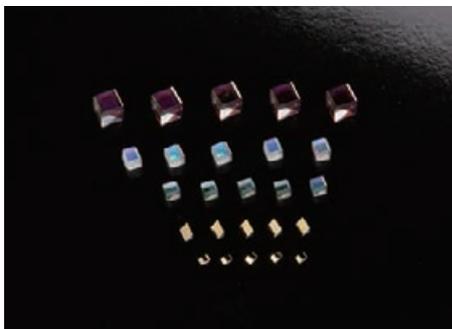
The Business Environment

■ Glass for optical devices

The market is growing due to greater investment in 5G and other communications infrastructure and increased data traffic due to the impact of the COVID-19 pandemic. We have a significant market share in this field, and we are developing new products such as micro prisms and ball lenses with a full AR coating — both of which result from our high-precision processing and assembly technologies — utilizing our high-performance thin films.

■ Glass for electronic devices

Various products in this field are widely used in electronic devices incorporated in household appliances, automobiles, and industrial equipment. Many of these devices have a large market share. Because the rate of technological innovation for such devices is fast, the product cycle is therefore shorter than it is for other businesses. Utilizing the fundamental technologies that contribute to our strong market share, we are promoting product development with an eye on market needs mainly in the 5G communication, automotive, semiconductor, and medical sectors.



Micro prisms

Our Strengths

To support rapid industrialization and commercialization, we engage in wide-ranging in-house efforts focused on materials development, products design and development and process development. 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. It is thus no surprise that we have been able to establish relationships of trust with our customers and have benefitted from a positive profile for our brand in the marketplace.

Corporate Strategies

Developing products and expanding sales in the growth markets of telecommunications, automobiles, and medical care; strengthening offerings in the areas of materials as well as devices

- Promoting product development and commercialization utilizing our strong ties with customers
- Building a supply system that meets market needs by enhancing quality, improving characteristics, and reducing costs
- Developing products with a long-term perspective by strengthening internal and external collaboration

Business Overview

In fiscal 2020, shipments increased year over year due to strong sales of glass for optical devices, although shipments decreased mainly in the automobile parts segment. Our joint venture in the LTCC (low-temperature co-fired ceramics) market also contributed to sales. As this is a new product, we have been able to develop materials for LTCCs suitable for parts and devices used in 5G communications networks while contributing to the improved performance of next-generation communications equipment. We have also commercialized products that address current social issues, such as our adaptation of high-efficiency deep UV transmitting glass for sterilization equipment in the medical segment.



Deep UV transmitting glass used for deep UV sterilization LEDs

Outlook for Fiscal 2021

In fiscal 2021, we expect steady growth centered on markets for household appliances, automobiles, and semiconductors. We remain committed to developing products with an eye on market needs. We will continue our three-pronged development approach in concert with our Research & Engineering Group and Process Development & Engineering Group while utilizing the support of our marketing organization in devising sales strategies for business growth. Currently, commercialization is progressing for infrared transmitting glass and for lids with a sealing material for packages for optical devices, which we anticipate will be employed in the automobile and medical segments. Moreover, we expect that our investments in LTCCs used in the semiconductor manufacturing process will bear fruit in fiscal 2021.

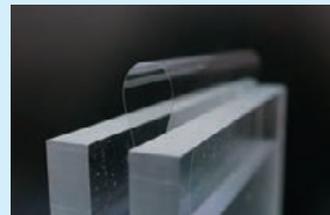


Infrared transmitting glass

In Focus Display-related Business

Developing the industry's thinnest cover glass

We have succeeded in developing Dinorex UTG™, a 25- μm (0.025-mm) glass for chemical strengthening – the industry's thinnest – for use as the cover glass of foldable displays. Formed with the overflow technology we have perfected through the manufacture of FPD glass, it demonstrates excellent bending characteristics due to its high surface smoothness and uniform plate thickness. This makes it ideal for use as a robust foldable display.



Outstanding bending characteristics

In Focus Optical and Electronic Device-related Business

Developing a lid with sealing material for packaging

In an effort to manufacture a highly reliable LED, LD, and sensor package, we focused on developing a successful base sealing material that reduces the stress generated by the difference in heat shrinkage between the lid and the solder after sealing the lid and the cavity. As a result, we have commercialized a "lid with sealing material" that integrates gold-tin (AuSn) solder. We will develop it for applications that require high reliability, such as deep UV LEDs used for sterilizing interior spaces as well as light sources for vehicle headlights.



Lid with sealing material

Business Overview

Performance Materials and Others

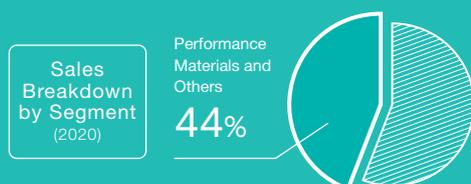


Glass Fiber-related Business

Senior Vice President and Group General Manager of Glass Fiber Group

Norio Nakamura

Trend in Net Sales (Performance Materials & Others)



Main Products

[Glass Fiber-related Business]

■ Glass fiber

Glass fiber is a material made up of thin glass filaments ranging in diameter from a few micrometers (μm) to around 10 or so micrometers. It has a high mechanical strength and produces exceptional composite materials. It is used in a variety of applications, including reinforced plastics and reinforced cement products.

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

■ 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 in other housing equipment.

■ Glass for building materials

NEG's 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

Automobile parts applications, which account for the majority of our glass fiber sales, were significantly affected by the COVID-19 pandemic in the first half of 2020, but demand recovered sharply in the second half of the year. As environmental awareness increases, the shift to electric vehicles and fuel cell vehicles is likely to accelerate. Moreover, in response to the demand for improved fuel economy, automobile parts will become lighter, leading to increased use of glass fiber for use in reinforced plastic. With regard to wind turbine blade applications, stable demand is expected over the long term, with windmill blades becoming larger as large-scale wind power generation projects proceed apace around the world arising from the global shift to renewable energy.

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, 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 more than 20 years our plants in Japan and Malaysia have been reusing all of the waste glass generated in our production processes, a resource that was normally disposed of in landfills. We have thus led the industry in establishing a production system committed to recycling.

Corporate Strategies

- Building a competitive global supply system by increasing production capacity at our Malaysian Plant and improving the configuration of our plants in Europe and the U.S.A.



■ Expanding market share in automobiles, wind power generation, infrastructure, and other growth segments

■ Pursuing environment-friendly manufacturing (improving long-term competitiveness by improving raw material efficiency and energy efficiency and improving our glass melting technology)

Business Overview

In fiscal 2020, shipments fell sharply in the second quarter (April–June 2020) due to the effects of the COVID-19 pandemic, compelling us to implement major production adjustments at our plants in Japan, Malaysia, the U.S.A., and Europe. In the third quarter (July–September 2020), shipments of glass fiber, used mainly in automobile parts, began to recover due to rapidly recovering demand in the automobile market and other segments. Overall, however, shipments declined year-on-year.

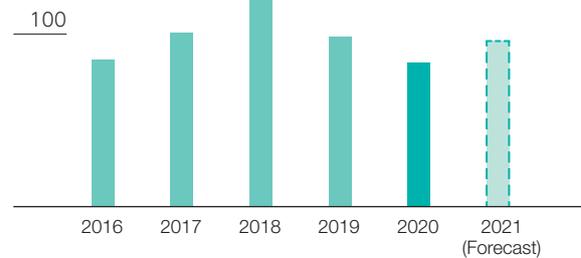
Against this background, we were able to institute structural reforms at our plants in Europe and the U.S.A. without losing momentum. In the U.S.A., we consolidated our three plants into two plants in fiscal 2020, while in Europe we are working to streamline the organization to improve productivity and reduce costs.

Outlook for Fiscal 2021

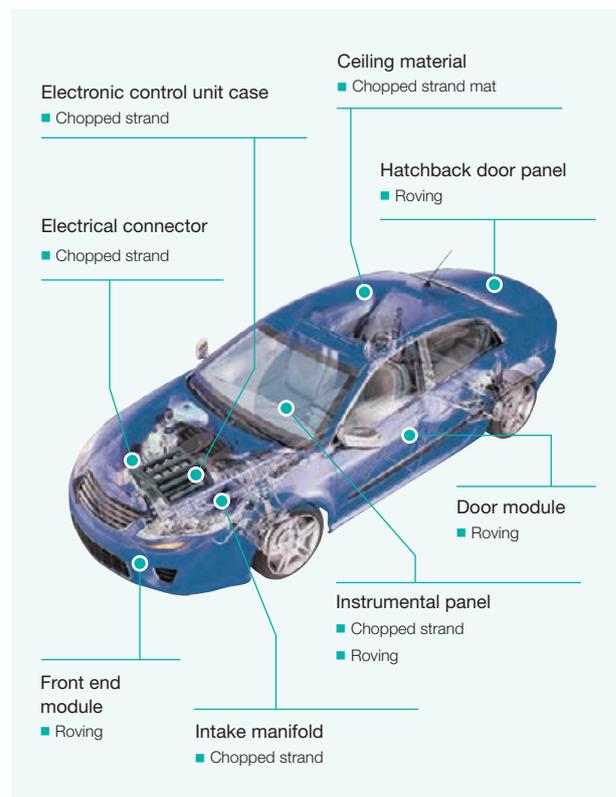
As market conditions rapidly recover In fiscal 2021, we will restart equipment that had been sidelined to fine tune production at an early stage and rebuild our production system globally to meet demand. Our plants in Europe and the U.S.A. will engage in accelerated efforts to achieve profitability. We have also decided to introduce the most advanced equipment in our Malaysia facilities to meet the growing demand, and we will increase production globally. As for new products, we will expand sales of flat glass fiber, high elastic modulus glass fiber, and alkali-resistant glass fiber.

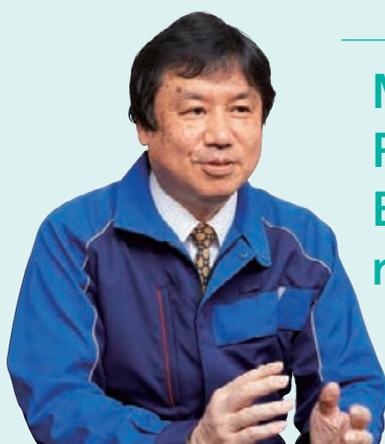
Net Sales of Glass Fiber Business

(Billions of yen)



Automotive Applications for Glass Fiber





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

Senior Vice President and Group General Manager of Consumer Glass Products Group

Akira Kishimoto



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 2020, 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 the first half of 2020, the COVID-19 pandemic had a major impact, with customers outside Japan temporarily suspending operations. By the second half of the year, however, the market had returned to a gradual recovery trend.

■ Glass for building materials

The market was sluggish in 2020 due to the postponement and cancellation of construction projects, but this market is expected to exhibit a moderate recovery in 2021.

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 strong demand by expanding the production and supply system

■ Heat-resistant glass
Expanding sales of top plates for cooking appliances to the European market; developing products and applications that take advantage of the unique properties of our glass-ceramic

■ Glass for building materials
Expanding sales of our FireLite™ fire-rated glass for fire protection applications
(Highlighting how the properties of our FireLite™ product differ from those of heat-resistant tempered glass and wire-mesh glass)

Business Overview

In fiscal 2020, shipments of glass tubing for pharmaceutical and medical use increased compared with the previous fiscal year as a result of strong demand in related markets. Shipments of heat-resistant glass and glass for building materials decreased from the previous year due to the effects of the COVID-19 pandemic.

Outlook for Fiscal 2021

We have achieved solid results by focusing on increasing sales of glass tubing for pharmaceutical and medical use in markets around the globe, and particularly in the growing market of China. In fiscal 2021, we will respond to rising demand by improving production efficiency at several sites, including our new Malaysian facility that went into operation in October 2020. In addition, with a view to expanding our sales in the global marketplace, we will establish a production system that will enable us to supply a wide variety of products.

In the area of heat-resistant glass, we have reduced lead times and have instituted a product development system intended

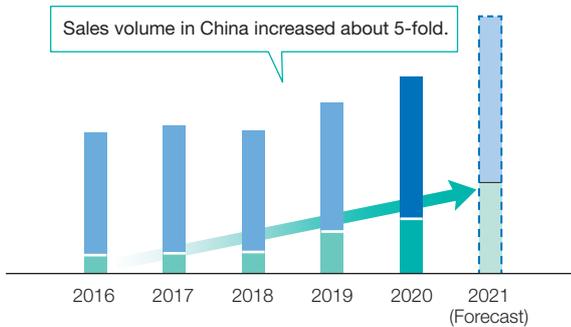


to expand sales of top plates for cooking appliances to European customers. In fiscal 2021, we will coordinate with our customers on the establishment of a mass production system.

In the market for glass used in building materials, we have highlighted the outstanding characteristics of products such as the industry's largest glass plate for fire protection equipment, which was introduced in August 2020. We therefore enhanced our presence in the construction industry. Going forward, we will promote automation of production processes and will improve production efficiency while reducing costs.

Unit Sales of Glass Tubing for Pharmaceutical and Medical Use

■ China ■ All Markets ex-China



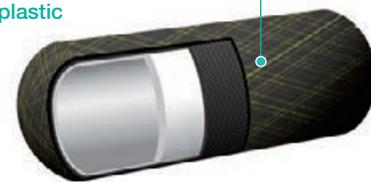
Glass tubing for pharmaceutical and medical use

In Focus Glass Fiber-related Business

Contributing to the acceptance of fuel cell vehicles (FCV)

FCVs replenish their hydrogen fuel at hydrogen stations. The hydrogen is compressed to a high pressure and transferred to a designated tank in the vehicle. These tanks feature triple-layer construction to contain the high-pressure hydrogen, and their surface is protected by glass fiber-reinforced plastic.

Glass fiber-reinforced plastic



In-vehicle hydrogen tank with surface protected by glass fiber-reinforced plastic

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

Introducing FireLite™, the world's largest sheet of heat-resistant glass-ceramic for fire protection equipment

In recent years, as architectural designs have become more varied, the size of openings has also become larger. Consequently, a need has arisen for larger sheets of transparent fireproof glass that have a clear view and can contribute to secure evacuation routes and high visibility. To meet these market needs, we have developed and marketed the world's largest such glass product, which is now even larger than before.



FireLite Plus™, in the industry's largest sheet

Corporate Governance

We aim to achieve medium- and long-term growth by enhancing our competitiveness with a motivated Board of Directors and strengthened supervisory functions across our 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, 2021, the Board of Directors consists of nine members (including two representative directors, four inside directors, and three 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.

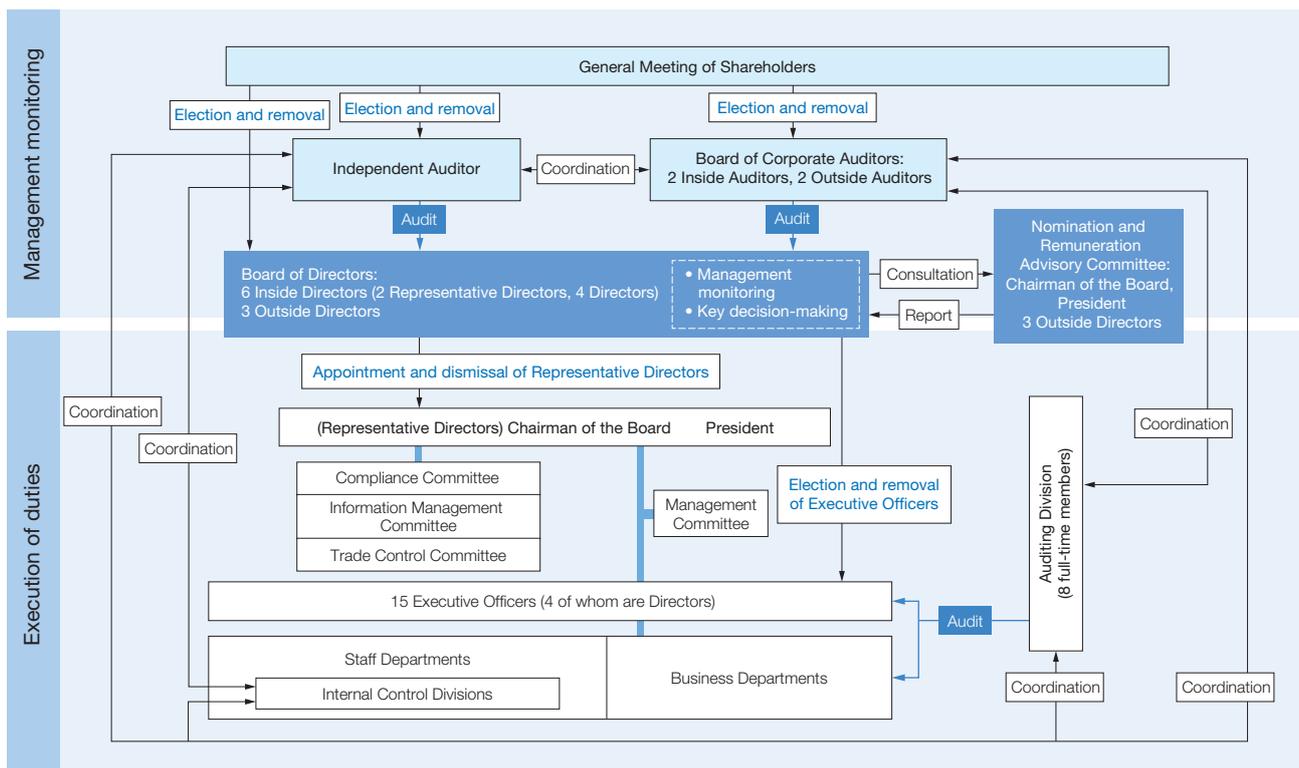
We have disclosed the reasons for the appointment of each director in the Notice of the 102nd Ordinary General Meeting of Shareholders (held on March 30, 2021), which is available on our website.

(https://www.neg.co.jp/uploads/sites/2/202103_102_en.pdf)

● Board of Corporate Auditors

We adopt a corporate auditor system. As of March 30, 2021, 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 annual budget meeting and periodically questioning Directors and Executive Officers about their duties and handling of business affairs.

Diagram of Corporate Governance System (as of March 30, 2021)



● 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 three outside directors, who represent the majority. 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)

● 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, 2021, 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, 2021, there are fifteen 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.

Attendance of Board of Directors and Board of Corporate Auditors Meetings in Fiscal 2020

	Name	Board of Directors	Board of Corporate Auditors
Representative Directors	Masayuki Arioka	14/14 meetings (100%)	—
	Motoharu Matsumoto	14/14 meetings (100%)	—
Directors	Hirokazu Takeuchi	14/14 meetings (100%)	—
	Akihisa Saeki	14/14 meetings (100%)	—
	Koichi Tsuda	14/14 meetings (100%)	—
	Hiroki Yamazaki	14/14 meetings (100%)	—
	Shuichi Mori	14/14 meetings (100%)	—
Outside Directors	Reiko Urade	14/14 meetings (100%)	—
	Hiroyuki Ito	11/11 meetings (100%) (Since assuming office in March 2020)	—
Full-time Corporate Auditors	Masahiko Ohji	14/14 meetings (100%)	13/13 meetings (100%)
	Yoshihisa Hayashi	14/14 meetings (100%)	13/13 meetings (100%)
Outside Corporate Auditors	Katsuhiko Matsui	14/14 meetings (100%)	13/13 meetings (100%)
	Tsukasa Takahashi	14/14 meetings (100%)	13/13 meetings (100%)

Outside Directors and Corporate Auditors

As of March 30, 2021, there are three outside Directors and two outside Corporate Auditors within our Company. Outside Directors make up one-third 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 a corporate management expert 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 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 2020 focused on (1) the Board of Directors in general, (2) the running of Board of Directors meetings, and (3) outside directors. While all respondents agreed with the question on whether the Board of Directors was engaged in constructive discussions, the internal directors discussed the agenda of the Board of Directors at management meetings held previously. Some voiced the opinion that fewer comments were submitted from internal directors on the Board of Directors than from outside directors. 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 the evaluation results and will continue to evaluate its effectiveness.

Corporate Governance

Training for Directors and Auditors

During Compliance Awareness Month, which is held in October of every year, we invite outside instructors to come and give lectures on compliance to our inside directors, full-time corporate auditors, and other executives. We also hold director training seminars every year, which provide our directors with a deeper understanding of current business conditions, including those surrounding corporate governance.

Our corporate auditors participate in seminars and information exchanges with outside organizations, through which they deepen their auditing-related expertise.

For our outside directors and outside corporate auditors, prior to assuming office, we provide them with explanations about NEG's current corporate situation and systems. After they have assumed office, we provide them with opportunities to tour our production facilities and subsidiaries, both in and outside Japan, and to conduct interviews with directors and executive officers.

Policy on Deciding Directors' and Corporate Auditors' Remuneration

NEG's 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 2021, NEG's financial reporting-related internal controls for fiscal 2020 were assessed as "effective." A report by an outside auditing company also assessed the controls as being appropriate in all key aspects.

Total Amount of Directors' and Corporate Auditors' Remuneration in Fiscal 2020

Category	Total amount of remuneration (millions of yen)	Total amount for each type of remuneration (millions of yen)				Number of eligible Board Members
		Base remuneration	Restricted stock-based remuneration	Bonuses	Retirement benefits	
Directors (Outside Directors excluded)	338	232	36	70	—	6
Corporate Auditors (Outside Corporate Auditors excluded)	40	40	—	—	—	2
Outside Directors and Corporate Auditors	31	31	—	—	—	6

Messages from Outside Directors

When I was employed by a trading company, I learned that the key to good corporate management is to engender a virtuous cycle that starts with employees providing good products. This in turn ensures customer satisfaction, earns profits, returns them to employees and shareholders, and contributes to society through payment of taxes, thus meeting the expectations of all stakeholders. However, in recent years, corporate management has been required to adhere to additional new guidelines known as environment, social and governance (ESG) initiatives as well as the UN's sustainable development goals (SDGs).

NEG has traditionally been a company that has demonstrated outstanding environmental initiatives, but in terms of governance, we now have three people, including one woman, sitting as outside directors, accounting for one-third of the Company's directors. In fiscal 2020, we established the Nomination and Remuneration Advisory Committee, chaired by outside directors who represent the majority. This Committee has established and strengthened the criteria and procedures for selecting and dismissing representative directors as well as the remuneration standards for directors. In terms of actual conditions, outside directors are guaranteed the right to speak freely at Board of Directors Meetings, and the Company's representatives not only respond in good faith in each instance, but also disclose detailed minutes and materials presented at Management Committee meetings. They also afford us an opportunity to meet with the general managers of the various business groups at briefing sessions. The outside directors have been diligent in fulfilling their duties and pledge to remain so.



Outside Director
Shuichi Mori



Outside Director
Reiko Urade

Two years have now passed since I was appointed an outside director. NEG's Board of Directors Meeting has a very transparent and open question-and-answer atmosphere, and we are satisfied with the management of such meetings, which enable positive discussions to take place. Having been involved in agricultural research and education at a university for many years, which obviously has little linkage to the glass industry, I am able to express my candid opinions at the Board of Directors Meetings, and I hope to continue contributing to the sound management of the Company and the improvement of ESG initiatives. In particular, I believe that my experience and knowledge as a researcher can be useful for developing the personnel who will be responsible for research and development, which is the foundation for further business development, and for demonstrating how NEG can proceed with research and development.

In addition, since I am the first female director in NEG's history, I will do my utmost to promote corporate diversity, which includes promoting the participation of women. Studies have shown that companies that hire highly diverse talent can achieve good performance over the long term. We hope that by proactively addressing this issue, we will further develop as a sound company capable of fulfilling its corporate social responsibility.

As a business scholar, I have been involved in research on the mechanisms of corporate growth and stagnation, and my life's work has been focused on researching American companies that have been highly valued for their innovation. From this experience, I have been engaged in discussions at the Board of Directors, with an awareness of the need to fully understand NEG's position in this regard.

Throughout my one-year term in this position, I have noted the strong commitment that is held in common by all Company directors: specifically, this is to develop a corporate vision we can all share to become the world's leading manufacturer of special glass. Thanks to this collective framework, Board discussions have been open-minded, focused, and productive. I think it is worth noting that, despite the outbreak of the COVID-19 pandemic, management's commitment to pursuing this corporate image has been unwavering.

On the other hand, in the future it will likely become ever more important to strike a balance between offensive and defensive strategies in the management approach to fulfilling this corporate image. It can be said that the real value of corporate governance lies in monitoring while providing support for such difficult management challenges. Although the responsibilities of outside directors will also become more onerous, we must do our utmost to remain cognizant of our responsibilities.



Outside Director
Hiroyuki Ito

Directors, Corporate Auditors, Executive Officers (As of March 30, 2021)

Directors



Chairman of the Board
(Representative Director)

**Masayuki
Arioka**

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



President
(Representative Director)

**Motoharu
Matsumoto**

[Auditing]

Apr. 1982 Joined Nippon Electric Glass
Jun. 2003 Appointed as CEO of Technoglass Inc.
Feb. 2005 Appointed as General Manager of Accounting Division
Apr. 2007 Appointed as Vice President
Jun. 2011 Appointed as Director (incumbent) and Senior Vice President
Apr. 2013 Appointed as Executive Vice President
Mar. 2015 Appointed as 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 Appointed as Vice President and Group General Manager of Electronic Products Group
Jun. 2013 Appointed as Director (incumbent) and Senior Vice President
Jan. 2017 Appointed as Executive Vice President (incumbent)



Director and
Senior Vice President

**Koichi
Tsuda**

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

Apr. 1982 Joined Nippon Electric Glass
Apr. 2011 Appointed as Vice President and General Manager of Administrative Division
Mar. 2015 Appointed as Director (incumbent) and Senior Vice President (incumbent)



Director and
Senior Vice President

**Hiroki
Yamazaki**

(Fundamental Technology, Intellectual Property, Environmental Management, Quality Auditing, Product Safety Management, Cooperation in Research & Technology)

Apr. 1984 Joined Nippon Electric Glass
Oct. 2006 Appointed as General Manager of Technical Division
Apr. 2011 Appointed as Vice President
Jan. 2016 Appointed as Group General Manager of Corporate Technology Group
Mar. 2016 Appointed as 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 Appointed as General Manager of Display Glass Division
Jan. 2016 Appointed as Vice President
Jan. 2020 Appointed as Senior Vice President (incumbent)
Jan. 2021 Appointed as Group General Manager of Display Glass Group (incumbent)
Mar. 2021 Appointed as Director (incumbent)



Outside Director
(Independent Director)

**Shuichi
Mori**

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



Outside Director
(Independent Director)

**Reiko
Urade**

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



Outside Director
(Independent Director)

**Hiroyuki
Ito**

Apr. 1992 Became research associate, Faculty of Economics, Shiga University
Apr. 2009 Became Professor, Faculty of Economics, Shiga University
Mar. 2020 Appointed as outside Director of Nippon Electric Glass (incumbent)
Apr. 2020 Became Emeritus Professor, Shiga University (incumbent) and Professor, Faculty of Business Administration, Osaka University of Economics (incumbent)

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

Corporate Auditors



Full-time

**Masahiko
Ohji**

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



Full-time

**Yoshihisa
Hayashi**

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



Outside (Independent
Corporate Auditor)

**Katsuhiro
Matsui**

Oct. 1990 Joined Showa Ota Audit Corporation
(now Ernst & Young ShinNihon LLC)
Aug. 1994 Registered as certified public accountant
Oct. 2010 Left Ernst & Young ShinNihon
Nov. 2010 Registered as certified tax accountant,
established Matsui-jicpa (incumbent)
May 2011 Became Representative Partner of Sakura
Horwath LLC (incumbent)
Mar. 2018 Appointed as outside Corporate Auditor
of Nippon Electric Glass (incumbent)



Outside (Independent
Corporate Auditor)

**Tsukasa
Takahashi**

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

Mamoru Morii
[Accounting, Purchasing, Corporate Strategy,
Information Systems]

Vice Presidents

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

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

Masahiro Kobayashi
[Electronic Products Business]

Hitoshi Kanaya
[Process Development & Engineering]

Toshiyuki Nakajima
[Administration, Human Resources]

Hidetaka Oda
[Display Glass Business (Production)]

Compliance

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.

NEGグループ企業行動憲章
～誠実な行動～

1. お得意先第一
○お得意先のご要望を理解し、そのご要望にどこまでもお応えします。
○社会に役立ち、かつ安全でお得意先の満足と信頼を得られる製品を提供します。
○新たな技術開発に挑戦し、文明の進歩と豊かな未来に寄与します。

2. 達成への執念
○執念をもって課題を成し遂げます。

3. 自由闊達
○前例にとらわれない自由な発想と、部門や世代にとらわれない自由な発言を尊重します。

4. 高い倫理観
○内外の法令、国際ルールを遵守し、常に高い倫理観をもって誠実に行動します。
○政治、行政との健全かつ正常な関係を保ち、反社会的勢力、団体には毅然と対応します。
○公正、透明、自由な競争、適正な取引を行います。
○会社資産を適正、確実に管理します。

5. 自然との共生
○自然と共存することを常に意識し、企業活動に伴う環境負荷の低減に努めます。
○地球環境の保全と循環型社会の実現に寄与します。

6. 社会貢献
○健全な企業活動を通して利益を生み出し、社会の持続的発展に貢献します。
○企業活動を行う国や地域社会の文化を尊重し、良き企業市民として行動します。

7. 人権尊重
○人権を尊重し、差別的取り扱い、児童労働、強制労働を認めません。
○安全で、従業員一人ひとりが十分に能力を発揮できる環境を確保します。

8. 情報発信
○適時、適切に、必要な企業情報を開示するとともに、広く関係先とのコミュニケーションを図ります。

以上

1998年 8月1日制定
2006年 2月1日改訂
2015年12月1日改訂

● 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 also been set up at most of our overseas subsidiaries and we are currently working to have it at all NEG Group companies in the future.



Poster for Compliance Awareness Month

● 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 us 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.

Thanks to these efforts, no affairs subject to legal actions, such as bribery, anticompetitive acts, or other violations occurred in fiscal 2020.



Training new employees in Otsu



Compliance workshop in Taiwan

Compliance Education, Workshops, and Lectures Held in Fiscal 2020

	Name	Intended Persons	No. of Times	No. of Participants	Themes
Japan	Education for new employees	All new employees	2	36	<ul style="list-style-type: none"> Corporate Philosophy, Code of Conduct, Principles of Activities What is compliance? Internal whistleblowing system Case studies and the like
	Workshop	Managers at our Company and subsidiaries in Japan (Participants shall inform other employees in their workplace of the content.)	4	258	<ul style="list-style-type: none"> The need for compliance Recent trends, compliance violations and response Internal whistleblowing systems and the like
	Lecture	Executives and general managers at our Company, representatives of subsidiaries in Japan, district managers	1	58	<ul style="list-style-type: none"> Duties and responsibilities of directors compiled from specific examples
	Antitrust seminar for sales departments	Employees of our Company engaged in sales activities	1	37	<ul style="list-style-type: none"> Antitrust Law Circumstances in various countries Recent notes and case studies
Overseas	Workshop	Managers at subsidiaries in South Korea, China and Taiwan	8	About 570	<ul style="list-style-type: none"> Corporate Philosophy, Code of Conduct, Principles of Activities Embezzlement and kickbacks Harassment and discrimination Bribery and the like

Compliance

Import/Export Control Initiatives

NEG has 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, NEG has 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 NEG 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 NEG but also its overseas subsidiaries are conferred AEO mutual recognition, thereby expediting smoother import/export customs procedures. In addition, NEG is the only Japanese glass manufacturer to be certified as an AEO for both imports and exports. (Current as of February 18, 2021.)

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.

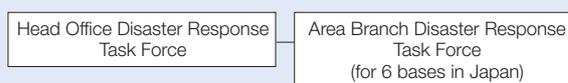
In 2015, we began using Business Continuity Planning (BCP), which replaced the previous disaster preparedness regulations. To facilitate the processes necessary for BCP, a manual providing information on detailed preparation procedures and actions that should be taken when an emergency or disaster strikes 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.

At our BCP response training session held in November 2020, we simulated a disaster scenario involving outbreaks of multiple clusters of COVID-19 at our workplaces. The simulation involved preparing a response and identifying various challenges.

● Basic Policy of BCP

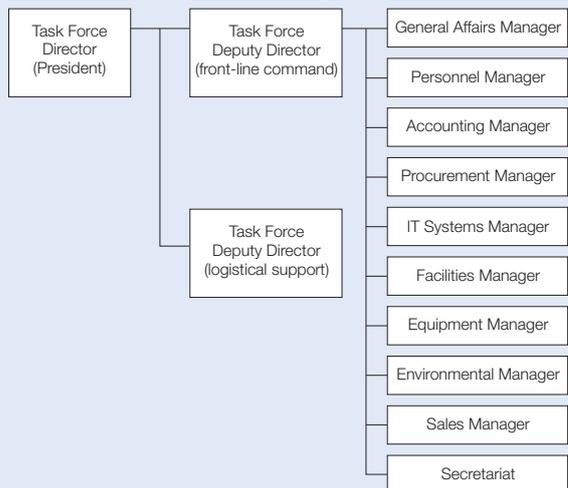
- ① To protect each employee and their families and to secure their safety
- ② To protect production equipment, to prevent the spread of damage as well as secondary disasters from occurring within the company and the adjacent communities, and to help with rescue efforts
- ③ To resume providing customers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

● BCP Activation Structure



Roles: Head Office: Implement basic policy and decision-making for general disaster response.
Branches: Facilitate disaster response while coordinating closely with the Head Office.

Structure of Head Office Disaster Response Task Force



BCP response training

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.

Business Risks

Risk	Description	Probability	Severity	Response
① Drastic changes in demand and market structure	Contracted demand for existing products due to technological innovation, or fluctuation of price or supply of products due to intensified competition	Moderate	Moderate	Speed up R&D, respond to new needs through aggressive sales.
② Capital expenditure risks	Significant change in demand forecast, shortage of plant capacity, sudden change in price of major equipment or materials	Moderate	Moderate	When and however necessary, build new production facilities and continuously upgrade them.
③ Risks related to procurement of materials and other items	Tight supply or delay of special raw materials or materials whose suppliers are limited, or escalating price of such materials	Moderate	Moderate	Maintain good relations with suppliers, find new suppliers, increase the number of suppliers, and switch to general-purpose materials.
④ Environmental risks	A shift to stricter environmental regulations, or more corporate responsibilities related to the environment demanded by society	Moderate	Moderate	Develop environmentally friendly products, ensure that facilities and management systems exert minimal impact on the environment, raise production efficiency, and practice the 3Rs (reduce, reuse, recycle).
⑤ Risks related to legal restrictions	Violation of the laws or regulations of the country or region where we operate	Moderate	Low	Comply with laws and regulations, survey changes in legal revisions, and hold periodic in-house education and audits.
⑥ Risks related to fluctuations in currency exchange rates and interest rates	Fluctuations in currency exchange rates and interest rates	Moderate	Low	Utilize forward exchange contracts, properly manage interest-bearing debt, and carry out interest rate swap transactions.
⑦ Risks related to natural disasters, accidents and outbreaks of communicable disease	Repair costs for associated damage to facilities and delays in production and shipments caused by natural disasters (such as earthquakes, typhoons, and heavy rains); accidents (such as fires and power outages); and outbreaks of infectious disease	Low	High	Implement a business continuity plan; provide seismic reinforcement of structures; implement disaster-preparedness measures; arrange dispersed manufacturing sites; and prevent the introduction and spread of communicable diseases.
⑧ Risks related to certain products	Change in investment or sales plan or material procurement policy of our major customers	Low	High	Diversify our customer base.
⑨ Risks related to overseas business operations	Unanticipated changes in laws or regulations; international tax risk; particular trade practices; changes in political or social conditions; and social turmoil due to terrorism, war, outbreaks of infectious disease, or other factors	Low	Moderate	Facilitate close communication between overseas subsidiaries and local authorities, and get advice from experts.
⑩ Risks related to information management	Claims for damages due to the leaking of confidential information, which our Group obtained in the course of business; tarnished corporate reputation due to such problems; or a decline in competitiveness due to a leak of proprietary information on innovative technology	Low	Moderate	Establish an Information Management Committee, deploy security systems, and provide in-house training.
⑪ Securing human resources and labor-related risks	Difficulty in securing appropriate human resources for future business development; and decline in corporate image and disputes due to various labor-related compliance violations (employment problems, harassment, human rights violations, etc.)	Low	Moderate	Secure an optimal and effective workforce through active recruitment and training of diverse personnel; achieve labor saving through automation and other means; and institute labor management according to laws and regulations.
⑫ Risks related to intellectual property rights	A litigation related to intellectual property rights	Low	Moderate	Obtain intellectual property rights useful for business, survey and monitor other companies' intellectual property rights, develop alternative technologies, and take over or license intellectual property from other companies.

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 upmost 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 greatest 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 to not include environmental conservation activities.

Diversity and Inclusion

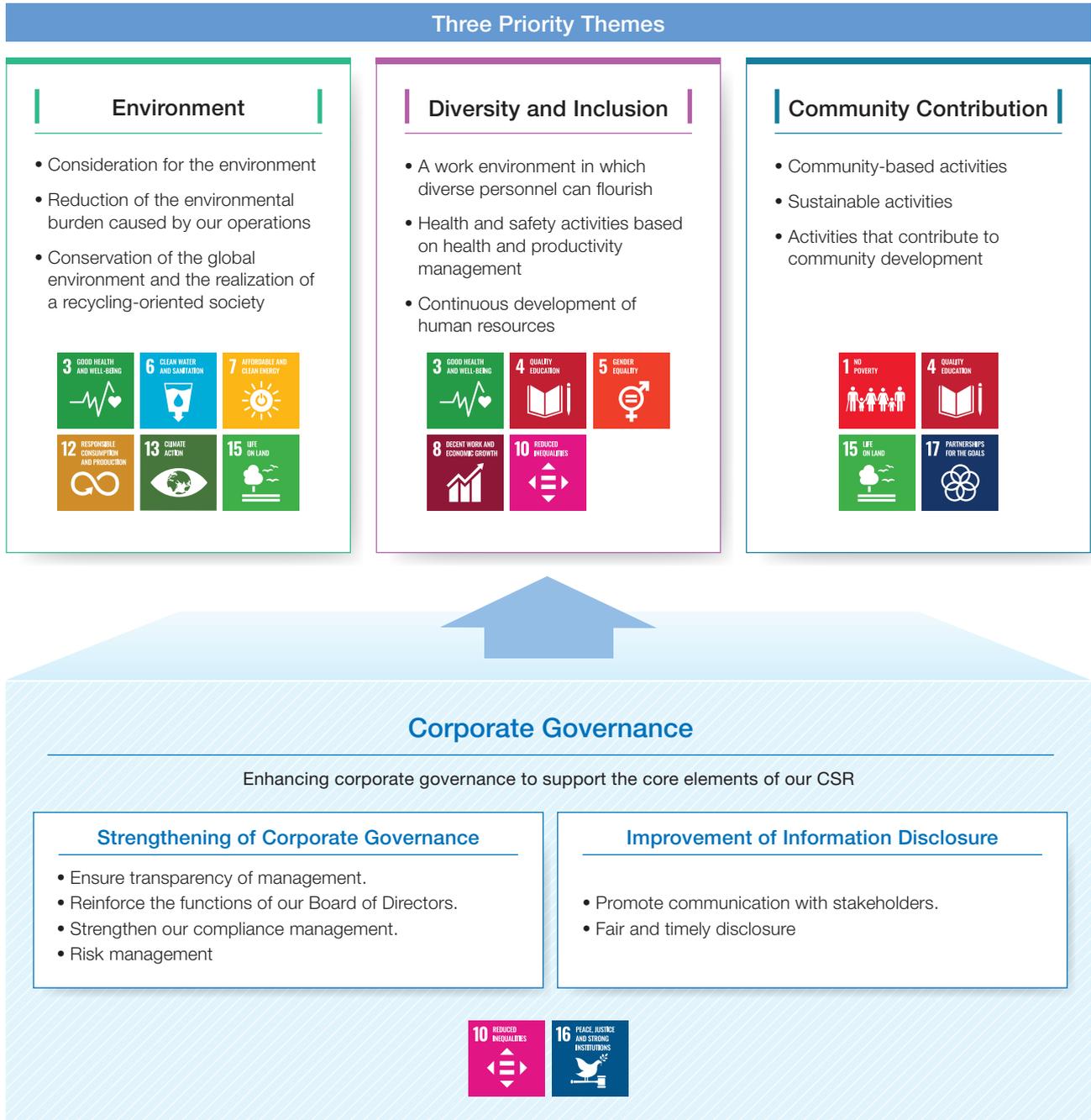
The basis of our thinking on Diversity and Inclusion is that the integrated strength of personnel with diverse backgrounds and values—whether in terms of gender, race, or so on—is the driving force behind corporate growth. Of course, employment of the disabled is also included in this theme. At the same 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 Environmental Management 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 | Priority Themes |

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

We hold consideration for the environment as an important value and have always been conscious of environmental conservation through our operations. Furthermore, we have managed our business based on the belief that practicing the world’s most efficient manufacturing process is, in fact, the key to realizing the world’s most environment-friendly manufacturing. Against this backdrop, we endeavor to not only reduce our environmental footprint but also tackle various issues, including sustainable development and conservation of biodiversity. We are also adopting measures to promote carbon neutrality, which is becoming a growing social concern in light of the climate change issue.

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.



Motoharu Matsumoto
President

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.

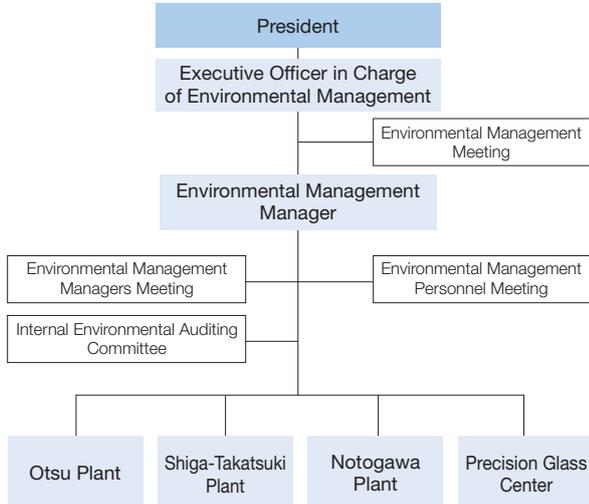
This Charter is informed to all employees and affiliated companies, and is made available to parties outside the Company at their request.

Promoting the Environmental Management Plan

In an effort to improve our environmental performance in fiscal 2020, we achieved 39 of the 41 targets we recognized at our plants in Japan. In fiscal 2021, we identified 39 targets that address urgent issues related to reductions in carbon dioxide emissions, energy and resource consumption; and matters directly linked to our core operations.

Environmental Management Organization

Environmental Management Organization Chart



● Environmental Management Meeting

The executive officer in charge of environmental management chairs this meeting, which is attended by the President and representatives of our operational departments and our major group companies outside Japan. Here, the attendees share specific environmental conservation initiatives stemming from the President's environmental policies. They also share performance reports and promotion updates on the results of environmental business plans. This meeting also serves as a forum for deliberations related to environmental conservation initiatives.

Environmental Education

All our employees are regarded as important contributors to our environmental initiatives. We therefore provide various types of training in environmental management. In recent years, we have focused on upgrading the skills of our internal auditors and evaluators of our compliance obligations, and we are now focused on training employees who have that responsibility.



Environmental Management Logo

This logo was created in June 1993 and it is used when making internal postings about our Environmental Management System activities and Environmental Charter. The design was selected from among internal suggestions. The green leaves represent environmental technology, nature, and the hands of our employees, while the blue circle depicts the sky and the Earth, environmental equipment made by our employees, and the community and society surrounding us.

ISO 14001 Certification Status

● Adapting to New ISO 14001:2015 Standards

The international environmental standard ISO 14001 was revised in 2015 in order to ensure the efficacy of ISO application.

We renewed our certification of registration in August 2017, and in 2020 we retained our certification through the first renewal audit under the new standard. In order to improve our environmental performance further, we are committed to implementing the PDCA (Plan, Do, Check, Act) cycle.

ISO 14001 Certification Status of Our Group

Company name	Date of certification
Nippon Electric Glass Co., Ltd. (multi-certification at four plants)	Aug. 27, 1999

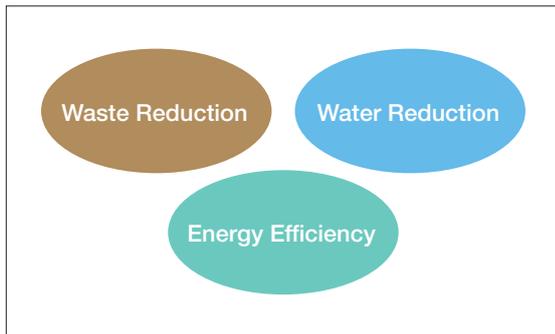
Group companies	Date of certification
Japan	
SGS Engineering Co., Ltd.	Jan. 19, 2001
Nichiden Glass Processing Company, Limited	Nov. 1, 2002
Shiga Nichiman Company, Limited	Feb. 15, 2013
Overseas	
Techneglas LLC	Jan. 31, 2000
Nippon Electric Glass (Malaysia) Sdn. Bhd.	Jan. 12, 2002
Nippon Electric Glass Taiwan Co., Ltd.	Sep. 18, 2006
Paju Electric Glass Co., Ltd.	Aug. 28, 2007
Nippon Electric Glass (Korea) Co., Ltd.	Oct. 9, 2007
Electric Glass (Shanghai) Co., Ltd.	Dec. 21, 2009
Electric Glass (Korea) Co., Ltd.	Dec. 9, 2014
Electric Glass (Guangzhou) Co., Ltd.	Nov. 11, 2015
Electric Glass (Xiamen) Co., Ltd.	Apr. 17, 2017
Electric Glass Fiber NL, B.V.	May 22, 2017
Electric Glass (Nanjing) Co., Ltd.	Apr. 13, 2018

Environment | Priority Themes |

Environmental Business Plan

Our Environmental Business Plan is our own unique initiative that applies business management principles to environmental conservation. In 2021, we are launching initiatives related to energy that will supplement our existing focus on waste and water. Through these efforts, we are demonstrating our commitment to reducing our environmental impact while adopting measures to address the issue of global warming.

Environmental Business Plan



● Energy Efficiency

To date, we have been dedicated to energy efficiency in our glass manufacturing, especially for our melting furnaces. As we broaden this initiative, we are visualizing the total amount of energy used globally by the Group and are implementing an energy business plan aimed at reducing waste and enhancing our energy efficiency. The data we gather will be analyzed to determine the measures we will implement to improve productivity.

Furthermore, we will combine these initiatives as we improve electricity usage in each process and introduce innovative manufacturing process technologies such as hydrogen combustion. We then aim to gather basic data for use in our efficiency improvement plans and goal setting, thereby improving our energy efficiency.

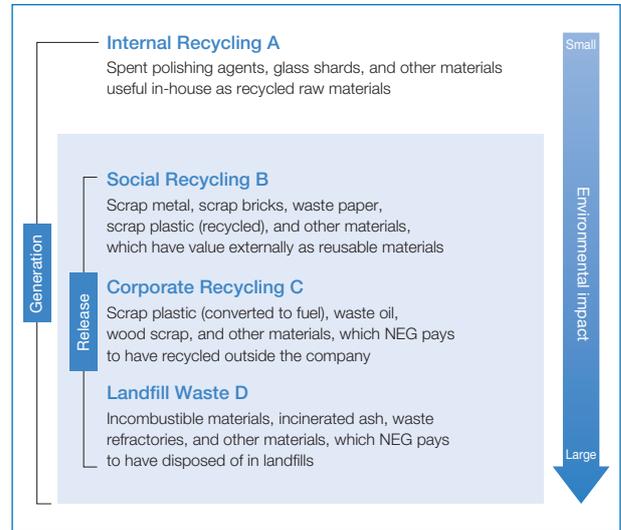
By achieving the industry’s highest level of efficiency and effectively reducing our CO₂ emissions, we will seek to become a leading example of the shift toward carbon neutrality.

● Waste Reduction

As part of the waste reduction efforts we launched in 2000, 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 regular maintenance of glass melting furnaces.

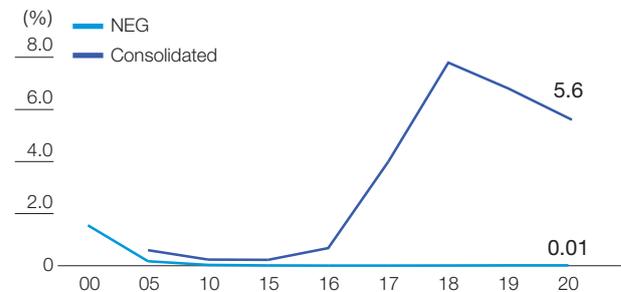
These waste categories are further separated into the four subcategories shown in the accompanying figure, with “Landfill Waste D” being our highest waste reduction priority due to its high environmental impact.

Waste Categories



With regard to normal waste requiring landfill disposal (Landfill Waste D), our ongoing efforts since 2009 to minimize and recycle what we generate on a daily basis have reduced the percentage of this waste per total weight of products sold to 0.1% or less. On the other hand, however, as a result of glass fiber business acquisitions in the U.K., Netherlands, and U.S.A. in 2016 and 2017, the amount of normal waste that the NEG Group produces has increased dramatically. Moving forward, we will continue to strengthen our efforts overseas to reduce the amount of normal waste we generate.

Normal Waste (Landfill Waste D) per Total Weight of Products Sold



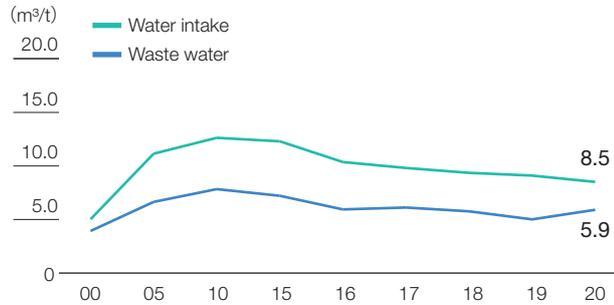
With regard to bulky construction waste requiring landfill disposal (Landfill Waste D), the majority of this waste is generated from glass melting furnace repairs and comprises unrecyclable waste brick. In 2017, we put in place a mechanism for shifting this waste to Social Recycling B by having a refractory manufacturer use waste chromium (Cr) bricks and zirconium (Zr) bricks as raw materials. This has also contributed to a significant reduction in landfill waste disposal expenses associated with Cr bricks, which have a particularly large environmental impact.

● Water Reduction

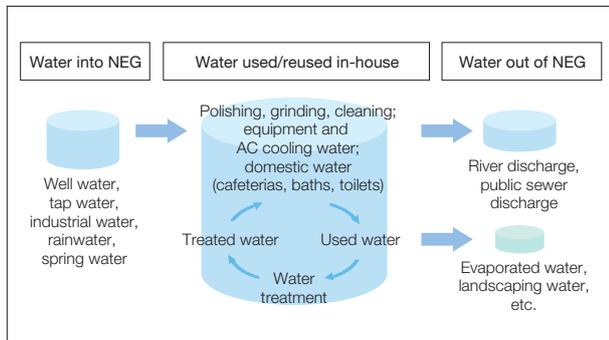
We believe that our level of manufacturing refinement is represented in the way water is used. Consequently, by managing our water usage we are increasing our understanding of the entire glass manufacturing process, including melting, forming, processing, and cleaning while further improving our process technology and equipment. This graph shows the change over

time in water intake and waste water per total weight of products sold. Although intensity increased after fiscal 2004 due to the rapid switchover from CRTs to LCDs, our intensity has declined as a result of our management efforts to improve our utilization efficiency within the LCD business since fiscal 2014.

Water Intake/Waste Water per Total Weight of Products Sold



Water Flow



Our Global Warming Countermeasures

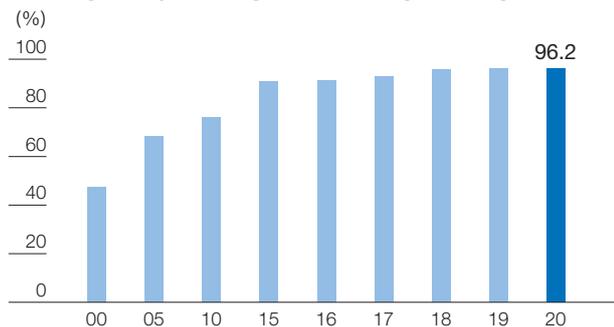
A significant amount of energy is used to melt glass. Therefore, we consider it our duty to further improve the energy efficiency of our melting furnaces.

● Oxy-fuel Firing Glass Melting Furnaces

Compared to air combustion furnaces, oxy-fuel firing furnaces remove more excess nitrogen. This reduces exhaust gas (and consequently exhaust heat), thus reducing fuel consumption, CO₂ emissions, and the generation of thermal nitrogen oxides (NO_x).

In 1993, we installed Japan's first oxy-fuel firing glass melting furnace. This technology has now been adopted for almost all of our furnaces.

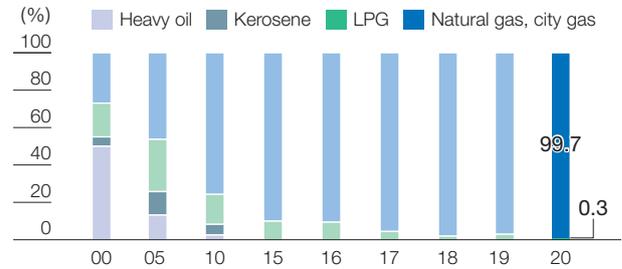
Percentage of Oxy-fuel Firing Furnaces among All Melting Furnaces



● Fuel Conversion in Glass Melting Furnaces

We have been switching to fuels with less environmental impact to operate our glass melting furnaces. We have switched from heavy oil to LPG and ultimately to natural gas and city gas, thus reducing CO₂ emissions.

Fuel Conversion

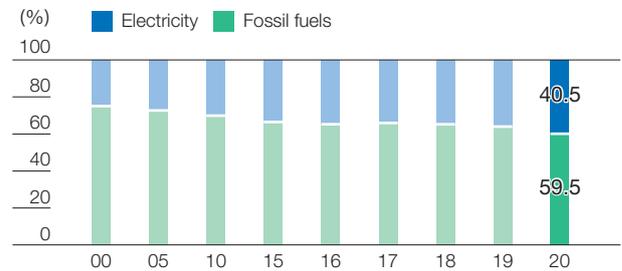


● Increasing Electricity Usage in the Glass Melting Process

In the melting process, both gas and electricity are used. In electric heating, unlike that using gas fuel, electrodes are directly inserted into the molten glass, resulting in excellent thermal conductivity of the glass. Also, in heating with electricity, the amount of exhaust gas and resulting exhaust heat can be reduced compared with that generated by heating with fossil fuels. Thus, if electricity usage is increased in percentage terms, energy savings and reductions in CO₂ emissions can be achieved.

We are continuing with group-wide activities aimed at increasing electricity as an energy source used to melt glass.

Electricity Usage



Supporting the forest conservation initiatives of the Konze Forestry Association

Every year since 2018, we have been purchasing nationally certified "J-Credits" (CO₂ absorption credits) from the Konze Forestry Association in the city of Ritto, Shiga Prefecture. In 2020, we purchased 50 metric tons of CO₂ absorption credits. We also participate in forest maintenance projects of the Konze Forestry Association in an effort to promote CO₂ absorption. This is a volunteer forest conservation initiative sponsored by the Environmental Conservation Association of Shiga Prefecture, of which we are members.



Environment | Priority Themes |

Analysis of Environmental Impact (fiscal 2020 consolidated basis)

Input		Output			
Energy consumption	Total energy	5,040,000 MWh	Atmosphere		
	Electricity	2,040,000 MWh		CO ₂	1,710,000 tons
	Fuel	3,000,000 MWh		SO _x	99 tons
		NO _x		2,640 tons	
Water	Water intake	7,450,000 m ³	Particulate matter	262 tons	
			Water	Waste water	5,320,000 m ³
			Waste	Total emissions	98,000 tons
				Recycling (Category B+C)	40,800 tons
				Landfill waste (Category D)	57,200 tons

Environmental Accounting (NEG)

(Millions of yen)

Category		Main Activities	2019		2020		
			Jan 1–Dec 31		Jan 1–Dec 31		
			Investment	Expenses	Investment	Expenses	
(1) Costs within operational area	Costs to reduce environmental footprint of production activities within operational area	Breakdown		67	4,320	29	3,225
			① Anti-pollution maintenance and management costs	53	862	8	422
			② Global environmental conservation costs	13	1,781	—	1,075
			③ Resource recycling costs	—	1,677	21	1,728
(2) Upstream and downstream costs	Costs to reduce environmental footprint of upstream and downstream production activities	Costs for green procurement, product recycling, container and packaging recycling, environmental conservation measures	—	213	—	195	
(3) Costs of management activities	Environmental conservation costs within management activities	Costs for environmental education, ISO 14001 system construction and maintenance, and measuring of environmental footprint; labor costs of environmental managers	—	873	—	666	
(4) Research and development costs	Environmental conservation costs of R&D activities	Expenses related to the development of environmentally friendly products, expenses related to production technology designed to reduce environmental impact	101	222	18	227	
(5) Costs for social initiatives	Environmental conservation costs of social initiatives	Beautification and tree-planting activities for harmonious coexistence with local communities, support for local communities, environment-related advertising costs, afforestation	—	94	—	134	
(6) Environmental remediation costs	Costs to deal with damage to the environment	Environmental restoration expenses	—	184	—	64	
(7) Other costs	Other costs relating to environmental conservation	Expenses for dismantling and removal of environment-related equipment and facilities	90	105	184	36	
Total			258	6,011	231	4,547	

Note: Regarding investment and expenses, only costs clearly arising directly from environmental concerns have been aggregated. In regard to production facilities and R&D, only sections related to the environment have been included.

(Millions of yen)

Item	Contents	2019	2020
Total investment	Scheduled repair of glass melting furnaces and production rationalization investment, investment to improve manufacturing productivity of major products	24,166	19,224
Total research and development costs	Development and improvement of process technology, and development of products, including FPD glass and glass for electronic devices	6,477	5,893
Proceeds from sales of valuable resources related to ③ of (1)	Sales of scrap metal, scrap bricks, etc.	23	9
Proceeds from sales of valuable resources related to (2)		0	0

Note: Following a review of "Total research and development costs," the figures for fiscal 2019 have been revised.

Protecting Biodiversity

As part of our corporate social responsibility, we are required to contribute to society by, for example, making an effort to protect the global environment through our business operations. We have identified “consideration for the environment” as an important value and have endeavored to reduce our environmental impact. Committed to the principle of leaving nature untouched except for the locations required for our business operations, the Notogawa Plant has established and maintained natural forests that make use of the native vegetation of the local Suzuka Mountain Range. The plant has even left local streams undisturbed since it was

established. The plant also grows flower seedlings in a greenhouse inside the plant and donates the seedlings to local residents.

In addition to reducing emissions of global warming gases, we voluntarily participate in maintenance work carried out by the local forestry association and take part in the extermination of invasive fish species in an effort to protect the ecosystem of Lake Biwa. We also conserve local biodiversity through various initiatives.



Pedestrian path through native natural vegetation

Environmentally Friendly Products

We contribute to a sustainable society by providing products that help conserve the global environment.



Saving energy and labor



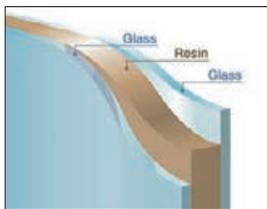
E Glass Fiber (Chopped strands)

Used in plastic automobile parts, this material helps make cars lighter.



G-Leaf™, ultra-thin glass

Just micrometers thin, it helps make devices lighter. It also expands the possibilities of labor saving in manufacturing through its use in a roll-to-roll process.



Lamion™, ultra-thin glass laminated on resin

This material combines the superb properties of glass and resin. It is used on train station platform doors thanks to its strength and light weight.



Lumiphous™, phosphor-glass composite

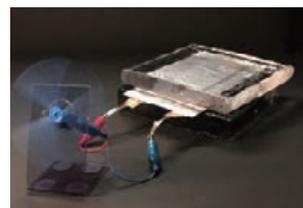
This wavelength-converting material helps expand the range of applications for energy-saving LED lighting.

Creating energy



E Glass Fiber (Roving)

This material is used as reinforcement for the plastic blades of wind turbines. It also holds promise as reinforcement in the hydrogen gas tanks of fuel-cell vehicles.



All-solid-state sodium-ion rechargeable battery (under development)

This product uses a cathode material made from a sodium-based glass-ceramic. The material is highly safe and can be reliably procured. The all-solid-state battery generates sufficient power to drive the motor even when the battery is sandwiched between blocks of ice and cooled to 0°C.

Reducing environmental impact



High-efficiency deep UV transmitting glass

Used for LED antiseptic lamps, this glass can contribute to the replacement of antiseptic lamps that use environmentally harmful mercury.

Diversity and Inclusion | Priority Themes |

We maintain a safe and healthy working environment for all employees and strive to develop competent human resources.

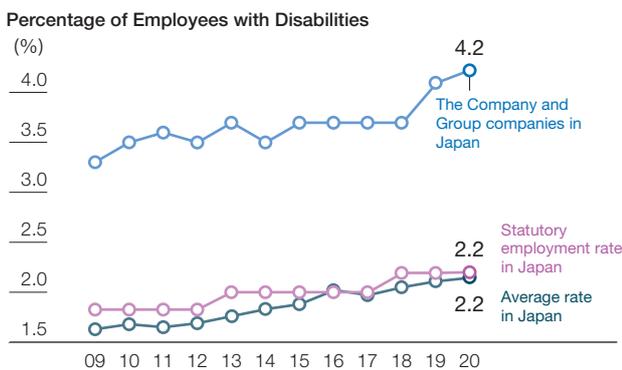
Recruitment and Workplace Environment Maintenance

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 is a priority.

● 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 2020, we had achieved a 4.2% employment rate for people with disabilities. We are now working to raise this to 4.6%*, which is double the statutory requirement.

*The statutory employment rate for people with disabilities was revised to 2.3% in March 2021.



Painting zebra crossing on plant premises



Making personal protective equipment

● Support for Raising the Next Generation

In February 2019, we received Platinum Kurumin accreditation under the Act on Advancement of Measures to Support Raising

Next-Generation Children in Japan and have continued providing such support. Under our Sixth Action Plan (2018–2021), we implemented measures encouraging male employees to take childcare leave and employees to take annual paid leave, and expanded our system to accommodate different working styles. We will finalize and announce our Seventh Action Plan to go into effect in April 2021, which aims to build a pleasant working environment that enables all employees to achieve a healthy balance in their work and home life.

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

6th Action Plan (Outline and Implementation)

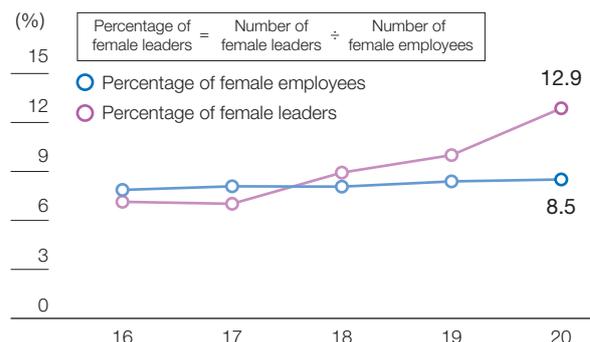
(April 1, 2018 to March 31, 2021)

- Childcare leave
 - Women** To achieve more than 75% utilization rate
 - Men** To achieve more than 13% utilization rate of those whose spouse has given birth
- Introduction of a new system, and strengthening of existing systems, to allow diverse work styles
- Measures to reduce overtime work
- Promotion of use of annual paid leave

Implemented: April 1, 2018 to December 31, 2020

- Childcare leave
 - Women** Utilization rate: 100% (9/9)
 - Men** Utilization rate: 21.8% (24/110)
- System to enable diverse working styles, reduction of overtime work, promotion of use of paid leave
 - Promotion of 5 consecutive days of leave taken twice a year
 - Expansion of workplaces eligible for flextime
 - Creation of re-employment system

Percentage of Female Employees and Female Leaders (NEG)



Note: A female leader is a female employee who oversees and manages subordinates.

● Active Participation of Senior Workers

The Company has prepared a retiree re-employment system that will create a welcoming work environment for employees at retirement age who want to continue applying their skills and experience and stay on the job. We have also set up training programs for employees in their 50s who have the desire to learn, to give them the opportunity to switch careers prior to reaching retirement age.

Responding to Globalization

In order to respond to the rapid globalization of our operations, we are actively hiring foreign nationals and cultivating global personnel who can work effectively anywhere in the world. We are also improving group synergy via personnel exchange between Japan and overseas subsidiaries, and among some subsidiaries outside Japan. In the future, we are considering creating a global human resource system in order to gain even greater synergy.



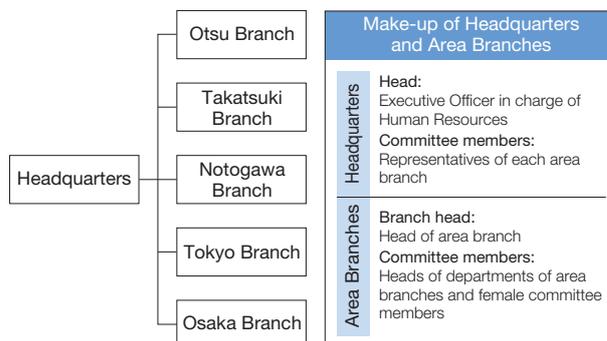
Human Rights Initiatives

In line with the spirit of our Corporate Philosophy Structure, respect for human rights are set forth in our Code of Conduct and Principles of Activities. Led by our committee on human rights issues, we perform human rights education and participate in and dispatch executives to projects run by administrative and external groups. Our Company is a board member of the Shiga Prefecture Human Rights Issues Liaison Committee. Based in Shiga Prefecture, where our main operations are located, this committee allows us to play a leading role in promoting human rights in the region.



Human rights education

Organization Chart of the Committee on Human Rights Issues



Health and Productivity Management

Since we believe that improving the health of all employees leads to corporate growth, we are developing health and safety activities based on health and productivity management. We are also 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. One initiative is a total ban on smoking in all plants and sales headquarters in Japan starting in fiscal 2021.

Mental and Physical Health KPIs

Physical health

Percentage with BMI of 25 or more
2020 34.5% ➔ 2022 28.0%

Mental health

Percentage suffering from high stress
Average for past 3 years 20.3% ➔ 2022 16.0%

NEG and the NEG Health Insurance Society were both certified in the 2021 Certified Health and Productivity Management Outstanding Organizations Recognition Program. The selections for certification are made jointly by the Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi. This certification system recognizes companies that engage in strategic health and productivity management for their employees. This marks our third consecutive certification.



Diversity and Inclusion | Priority Themes |

● 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 company-wide health and safety program, our health and productivity management philosophy forms the basis for an action policy aimed in part 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.

In addition to periodic workplace patrols, we also implement educational awareness campaigns, hazard prediction (*kiken yochi*) activities, and information sharing among all operational sites both in and outside Japan, so that we can increase awareness of health and safety issues and achieve our zero-accident benchmark. Furthermore, for all employees we have an EAP (Employee Assistance Program) and conduct stress checks as part of our measures concerned with mental health.

In fiscal 2020, there were two employee accidents at NEG resulting in lost workdays. This has brought into focus issues that we will incorporate into the health and safety initiatives we implement in fiscal 2021 and afterward in order to ensure we remain accident-free.

Industrial accident frequency rate (NEG)	0.5
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Organization Chart of Health and Safety for Each Area



● Work-style Reforms

We started promoting work-style reforms in 2017. By eliminating unnecessary and duplicated work through task inventory checks and maximizing use of IT, we have improved efficiency. 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.

Number of Paid Leave Days Taken

	Days Taken	Percentage of Days Taken
Fiscal 2020	16.3	68%

Main Initiatives	
<ul style="list-style-type: none"> Task inventory checks Active use of IT Conference reforms (shorter, etc.) 5 consecutive days of leave taken twice a year Full implementation of no-overtime days 	<ul style="list-style-type: none"> Telecommuting system Re-employment system Expansion of workplaces eligible for flextime
* New initiatives (from April 2021)	
<ul style="list-style-type: none"> Expansion of telecommuting system Work-style reform-related training Provision of child-rearing and nursing care-related information 	

Human Resource Development

In order to attain our goal of being the world’s leading manufacturer of special glass, we need to have human resources 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 more robust training, which will help them get to that next level.

Training Programs

Category	Items
Level-specific training	New employee training, young and mid-career employee training (3rd, 5th, 10th year), managerial position training, training for employees over the age of 50 (career development seminar, life plan seminar)
Global human resource training	Global Communications Program (GCP, practical business English training), overseas training for newly hired administrative employees, skills development language training (English, Chinese)
Skills training	Intellectual property training, accounting seminars, sales training, lectures on glass basics, AI and IoT seminars
Others	Compliance training, information security training, health and safety seminars, industry certification and other self-development programs

Voices for Diversity

No distinction needed between men and women in the working world, but drawing out an individual's abilities is vital.

I'm in charge of alliances with companies outside of Japan, plus various projects in the Corporate Strategy Division where I work. I am always looking for ways to use my experience in sales to do things that overcome barriers between business divisions and benefit the Company. In my work with companies and groups outside of Japan, I get to meet lots of women active in their fields in different countries. Sometimes we discuss difficulties that we face as women or share stories of distressing experiences. We often talk about having a career as a woman, something that crosses the boundaries of country or culture. Compared to other parts of the world, I feel that Japan is still behind in many ways, but in the working world I don't think a distinction needs to be made between men and women. I would like our Company to be one that appropriately draws out the abilities of each individual and their potential in various environments, providing everyone with the motivation to work. I plan to continue working hard based on this approach.



Manager
Corporate Strategy Division

Yuki Uno

A unique company that supports the NEG Group with harmony among its diverse staff

E.G. Univer Support Co., Ltd. was established as a special-purpose subsidiary to employ people with disabilities. When founded, we were just the sixth such company in Japan, and last year marked our 40th anniversary. Our aim is to provide a workplace for as many people with disabilities as possible. People young and old, male and female, those with disabilities and those without all join together in harmony here as we strive to do our best, encourage improvement in job skills, and try to increase the range of work people can handle. Recently we have worked to build systematic knowledge in the area of employing people with disabilities from their hiring to their settling in to work to expanding their scope of duties. For years we have set out to achieve double the statutory employment rate for people with disabilities, and we are in reach of that lofty goal. I encourage everyone to take pride in their work and pursue their dreams at our Company, which uniquely supports the NEG Group through direct contributions to society.



President
E.G. Univer Support Co., Ltd.

Shigeru Goto

Always keep an inquiring mind for personal growth.

Global management decisions depend on quick access to information. Our job in accounting is to process accounts with a sense of speed, covering planning, forecasting, monthly statements and group reporting packages. The more I do accounting work, the more I realize that I have a lot yet to learn. Rather than merely giving orders to my subordinates, I try to show them by example how to perform tasks, then assign the work and make sure they fully understand what is expected so that they can learn to do it on a regular basis. This process also helps them to develop a sense of responsibility. My subordinates are working to improve themselves by maintaining an inquiring mind and pursuing things, knowing that the more action they take the more experience they will build, developing the confidence that they can broaden their outlook and achieve personal growth. I am deeply grateful to the many people who listen seriously to my opinions, take them into account, and support me. Let's continue to work together, getting through stress with a smile!



Accountant Junior General Manager
Administrative Department
Nippon Electric Glass Taiwan Co., Ltd.

Kuo Chuan Chun

Community Contribution | Priority Themes |

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

Supporting the Younger Generation

● Welcoming Visitors to Our Plants and the Showroom

We welcome local children, students, and neighborhood councils to visit our plants and showroom. This supports the development of the younger generation and deepens the community's understanding of our business activities. In 2020, there was a sharp drop in visitors due to COVID-19 pandemic. We welcomed about 140 visitors to tour our plants in and outside Japan, and a cumulative total for the year of about 150 people, including local residents, to facilities that we open to the public.



Local high school students visiting our showroom at the Otsu Plant



Sixth graders from a local elementary school visiting the Electric Glass (Shanghai) plant



Supporting Shiga Prefecture's Lake Biwa Floating School program

● Visiting Lessons

Every year, we co-sponsor and cooperate with Otsu City Science Museum in their IF (Innovation for the Future) Class program, giving visiting lessons and plant tours to local students. This program was suspended in 2020 to prevent the spread of COVID-19.

Electric Glass (Xiamen) did, however, give visiting lessons on glass to approximately 600 local students in either their third year of junior secondary or first year of senior secondary school. The students learned about the characteristics and functions of glass

and about glass production methods. It was a terrific opportunity for children to experience the unlimited possibilities of glass.



An IF Class visiting lesson (suspended in 2020)



Visiting lesson by Electric Glass (Xiamen) at a local junior secondary school

● 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.

Based on the significant results that had been achieved, we will further extend this collaboration agreement and hold NEG's endowment course through March 31, 2025.

● 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). As part of these activities we held an online company tour and an event to exchange information.



A company tour and exchange event conducted online to prevent the spread of COVID-19

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 hold donation and support activities. See the table on the right for our activities in 2020 in and outside Japan. In 2020, to prevent the spread of COVID-19, we severely curtailed activities while providing support to local communities suffering from outbreaks of the infectious disease.

Employees joining community activities	Approx. 300
People visiting our summer festival and other events	Suspended
People joining dialogue between NEG and neighborhood councils	Approx. 10

● Photographs of Main Events and Support Activities



Lunch Box Fair held at the Notogawa Plant to support local restaurants during the pandemic



Donation to a neighboring village by Electric Glass (Xiamen)



Local senior group exchange facilitated by Electric Glass (Korea)



Children playing in Takatsuki Industrial Park (a park managed by Shiga-Takatsuki Plant, which is free to use)



Neighborhood clean-up at Electric Glass (Guangzhou)



Donation of kimchi to 210 local households by Electric Glass (Korea) and Paju Electric Glass

Communicating with Stakeholders

We will continue working to enhance our corporate value by maintaining active communication with various 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 Shareholders and Investors

● General Meeting of Shareholders

On March 30, 2021, the 102nd 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.



● 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 2020, 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 2020 Results

Total number of dialogues carried out	168 companies
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● 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 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.

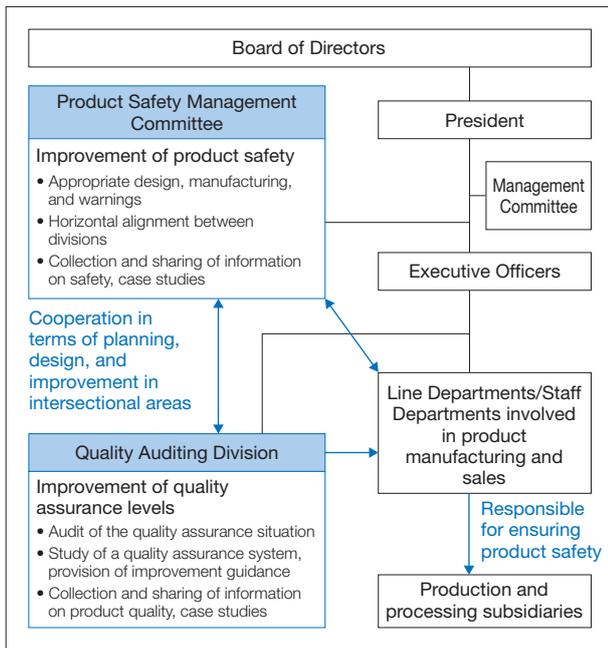
Quality Assurance Department

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.



Virtual booth exhibit at SID 2020 (The Society for Information Display)

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 products and services of superior quality and price competitiveness. In order to enhance the performance and efficiency of the entire supply chain, we ask our business partners to work to improve their competitiveness and to comply with laws and regulations.

Basic Procurement Policy

- 1 Open and fair business dealings
- 2 Harmonious mutual prosperity with partners
- 3 Compliance with social norms
- 4 Environmental consciousness (green procurement)

Request to Our Business Partners

- 1 Competitiveness of purchasing products
- 2 Compliance with laws, regulations, and social norms
- 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/>

Analysis of Operating Results and Financial Situation (Consolidated)

Business Climate and Operating Results

Despite some signs of recovery, the global economic outlook remained uncertain because of the impact of the US-China trade dispute and the novel coronavirus pandemic (hereinafter, COVID-19) on economic activities.

In the Electronics and Information Technology sector, shipments of glass for flat-panel displays (FPDs) exceeded the previous fiscal year. The negative impact of customers cutting back on production in the second quarter was offset by the rapid recovery of the display market from the third quarter onward. Shipments of cover glass (glass for chemical strengthening) decreased from the previous fiscal year due to sluggish demand for smartphones and other products. Shipments of glass for optical and electronic devices increased from the previous fiscal year thanks to strong sales of optical-related glass, while glass for automobile parts and others decreased. Our joint venture in LTCC (low temperature co-fired ceramics) also contributed to sales.

In the Performance Materials and Others sector, shipments of glass fiber began to recover mainly in automobile parts applications from the third quarter onward after bottoming out in the second quarter. However, compared to the previous fiscal year, shipments saw a decline due primarily to the effects of COVID-19. Shipments of heat-resistant glass and glass for building materials also decreased from the previous fiscal year, having been adversely affected by COVID-19. Shipments of glass tubing for pharmaceutical and medical use increased from the previous fiscal year, spurred by brisk demand from related markets. These factors combined to produce net sales of ¥242,886 million (\$2,335 million), a decrease of 5.7% from the previous fiscal year.

In terms of profit and loss, while decreased net sales, a lower capacity utilization rate of glass fiber and other factors pushed down profits, significant improvement in productivity of glass for FPDs, etc. and a review of construction projects pushed up operating profits to ¥17,661 million (\$170 million), an increase of 8.6% from the previous fiscal year. As a result, operating profit ratio rose to 7.3%, an increase of 1.0 points from the previous fiscal year.

For the net amount of other income and expenses, we earned total other income of ¥2,236 million (\$22 million). For other income, while reversal of reserve for special repairs decreased, gain on sales of investment securities increased. For other expenses, loss on impairment for the current fiscal year decreased significantly from a year earlier when we posted a large amount of loss. As for losses on accidents, in the previous fiscal year, we recorded costs incurred from a power outage at an overseas subsidiary, damage to some production equipment in Japan due to typhoons, and other factors. For the current fiscal year, we posted losses related to an accident at an overseas subsidiary and a power outage at a plant in Japan. Restructuring expense for glass fiber subsidiaries was also recorded.

As a result, profit before income taxes came to ¥19,897 million (\$191 million; the previous fiscal year's loss before income taxes was ¥19,268 million). Profit attributable to owners of the parent was ¥15,253 million (\$147 million; the previous fiscal year's loss attributable to owners of the parent was ¥33,670 million).

Net sales and operating profit ratio



Financial Position

Total assets at the end of fiscal 2020 were ¥658,140 million (\$6,328 million), a decrease of ¥6,661 million (\$64 million) from a year earlier. Current assets saw an increase in cash and time deposits due to factors such as an increase in operating cash flows and new borrowings, despite payment of dividends and redemption of bonds. Meanwhile, inventories decreased due to production adjustments amid COVID-19 and sales that started recovering in the second half of the year. Looking at property, plant and equipment, despite the acquisition of equipment for glass for FPDs and glass tubing for pharmaceutical and medical use, continuing depreciation and other factors caused net property, plant and equipment to decrease. Total investments and other assets also decreased due to the sale of and a decline in valuation of investment securities.

Total liabilities at the end of fiscal 2020 were ¥181,220 million (\$1,743 million), a decrease of ¥6,426 million (\$62 million) from a year earlier. For current liabilities, a decrease in purchasing in step with production adjustments and other factors resulted in a decrease in notes and accounts payable. In addition, unsecured bonds were redeemed. Meanwhile, the transfer of current portion of long-term debt resulted in an increase in short-term debt. For long-term liabilities, despite new borrowings, we recorded a decrease in long-term debt as a result of the aforementioned transfer to short-term debt.

Total net assets at the end of fiscal 2020 were ¥476,920 million (\$4,586 million), a decrease of ¥235 million (\$2 million) from a year earlier. Despite payment of dividends, there was an increase in retained earnings as we recorded profit attributable to owners of the parent. There was also a decrease in foreign currency translation adjustments due to the strong performance of the yen against some foreign currencies.

Liabilities, net assets, and equity ratio



Cash Flow Analysis

● Cash flows from operating activities

We recorded a profit before income taxes in fiscal 2020 as we achieved the earnings described in the aforementioned Operating Results. In addition, while there was a decrease in trade payables due to production adjustments, we posted a decrease in inventories thanks to the recovery in sales that started in the second half of the year. Depreciation fell below year-on-year mainly because we recorded a large amount of impairment loss related to the US and European glass fiber subsidiaries in the previous fiscal year, which decreased the burden of depreciation for the current fiscal year. As a result, we recorded ¥47,862 million (\$460 million) in net cash from operating activities, an increase of ¥26,225 million (\$252 million) from the previous fiscal year.

● Cash flows from investing activities

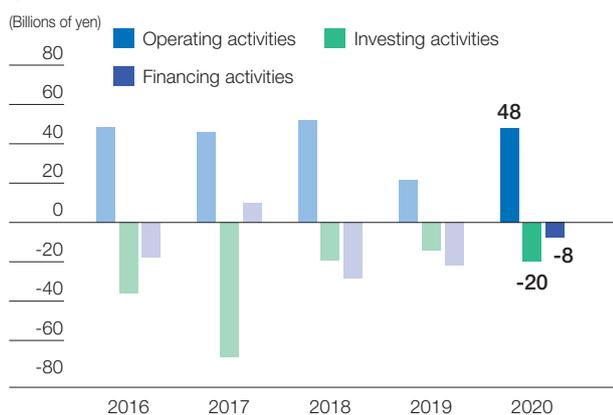
Mainly due to acquisitions of property, plant, and equipment, including acquisitions for glass for FPDs and glass tubing for pharmaceutical and medical use, net cash used in investing activities was ¥19,760 million (\$190 million), an increase of ¥5,443 million (\$52 million) from the previous fiscal year.

● Cash flows from financing activities

Despite new borrowings, payment of dividends, redemption of bonds and other factors resulted in net cash used in financing activities of ¥7,739 million (\$74 million), a decrease of ¥14,237 million (\$137 million) from the previous fiscal year.

After factoring in a reduction of ¥125 million (\$1 million) due to exchange rate changes, the balance of cash and cash equivalents at the end of fiscal 2020 was ¥121,215 million (\$1,166 million), an increase of ¥20,238 million (\$195 million) from the previous fiscal year.

Cash flows



Capital Expenditure

Capital expenditure during fiscal 2020 was ¥23,447 million (\$225 million). In the Electronics and Information Technology sector, the primary investment expenditure was directed at drastically improving productivity of glass for FPDs and upgrading equipment for sales expansion of the same. Meanwhile, in the Performance Materials and Others sector, the primary investment expenditure was made to enhance production capacity for glass tubing for pharmaceutical and medical use at Nippon Electric Glass (Malaysia) Sdn. Bhd.

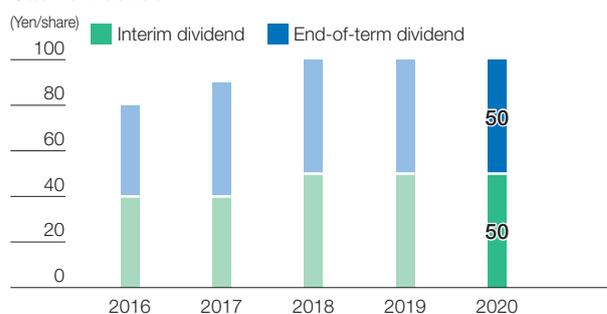
Dividend Policy

We view shareholder returns as a key management priority. With regard to dividends to shareholders, our basic policy is to maintain dividend payouts stable and unaffected by earnings fluctuation to any serious degree over the long term. We determine the dividend amount in accordance with our financial position and other factors, while aiming for a dividend on equity (DOE) ratio of at least 2%.

The end-of-term dividend for fiscal 2020 was ¥50 (\$0.48) per share. When combined with the interim dividend of ¥50 (\$0.48) per share, the annual dividend for fiscal 2020 amounted to ¥100 (\$0.96).

For the next fiscal year, we plan to pay ¥50 (\$0.48) per share for both the interim and end-of-term dividends (totaling ¥100 [\$0.96] for the annual dividend), which are the same amounts as in fiscal 2020.

Cash dividends



• Per share of common stock amounts are retroactively adjusted for subsequent stock consolidation.

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.

	2012/3	2013/3	2014/3	2014/12*
For the year				
Net sales	¥ 338,214	¥ 287,304	¥ 252,548	¥ 192,692
Operating profit	61,639	24,968	16,171	5,224
Profit (loss) attributable to owners of the parent	19,409	10,603	12,432	5,938
Depreciation and amortization	54,785	46,105	35,891	28,420
Capital expenditures	98,788	37,487	46,962	45,214
Research and development	6,464	6,833	6,920	5,527
At year-end				
Total assets	¥ 687,070	¥ 697,386	¥ 707,021	¥ 731,185
Current assets	224,416	243,577	247,502	264,001
Net property, plant and equipment	420,311	395,376	393,751	397,273
Current liabilities	135,200	88,038	86,970	82,701
Interest-bearing debt	86,812	102,604	99,492	109,141
Net assets	475,736	495,295	510,807	522,577
Cash flows				
Cash flows from operating activities	¥ 83,737	¥ 55,111	¥ 46,700	¥ 38,837
Cash flows from investing activities	(79,827)	(46,545)	(33,843)	(29,264)
Cash flows from financing activities	(14,731)	7,667	(11,190)	1,699
Cash and cash equivalents at end of year	105,210	121,741	123,888	129,823
Per share of common stock (yen and dollars)				
Profit (loss) attributable to owners of the parent	¥ 195.09	¥ 106.58	¥ 124.97	¥ 59.69
Net assets	4,727.33	4,914.84	5,057.28	5,163.32
Cash dividends	75.00	80.00	80.00	60.00
Operating profit ratio (%)	18.2	8.7	6.4	2.7
Equity ratio (%)	68.4	70.1	71.2	70.2
Return on equity (%)	4.2	2.2	2.5	1.2

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, 2020 of ¥104 to U.S. \$1.00.

4. As of December 31, 2020, Nippon Electric Glass Co., Ltd. had 26 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)

	2015/12	2016/12	2017/12	2018/12	2019/12	2020/12	
	¥ 251,178	¥ 239,412	¥ 282,447	¥ 300,327	¥ 257,511	¥ 242,886	\$ 2,335,442
	22,035	19,571	32,202	24,866	16,258	17,661	169,817
	9,637	4,969	27,184	15,200	(33,670)	15,253	146,664
	37,154	31,256	28,735	29,776	28,576	24,932	239,731
	49,212	46,429	52,913	49,340	20,160	23,447	225,452
	6,183	6,658	6,898	6,959	6,901	6,259	60,183
	¥ 726,938	¥ 693,918	¥ 764,420	¥ 725,320	¥ 664,801	¥ 658,140	\$ 6,328,270
	267,430	254,870	262,932	247,742	241,483	246,400	2,369,231
	386,013	367,399	393,818	386,541	358,682	355,728	3,420,462
	105,400	86,025	103,836	112,992	96,485	103,577	995,933
	109,731	101,997	120,661	112,005	100,479	103,687	996,991
	519,801	509,564	543,789	521,548	477,155	476,920	4,585,769
	¥ 46,797	¥ 48,261	¥ 46,160	¥ 52,002	¥ 21,637	¥ 47,862	\$ 460,212
	(32,638)	(36,139)	(68,644)	(19,551)	(14,317)	(19,760)	(190,000)
	(7,892)	(17,624)	9,797	(28,503)	(21,976)	(7,739)	(74,413)
	133,856	126,167	113,835	116,249	100,977	121,215	1,165,529
	¥ 96.88	¥ 49.95	¥ 273.29	¥ 154.26	¥ (348.50)	¥ 157.84	\$ 1.52
	5,159.30	5,069.60	5,416.93	5,346.03	4,885.50	4,886.10	46.98
	80.00	80.00	90.00	100.00	100.00	100.00	0.96
	8.8	8.2	11.4	8.3	6.3	7.3	
	70.6	72.7	70.5	71.2	71.0	71.7	
	1.9	1.0	5.2	2.9	(6.8)	3.2	

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.

Consolidated Balance Sheets

Nippon Electric Glass Co., Ltd. and Consolidated Subsidiaries
December 31, 2019 and 2020

ASSETS

	Millions of yen		Thousands of U.S. dollars (Note 1)
	December 31, 2019	December 31, 2020	December 31, 2020
Current assets:			
Cash and time deposits (Notes 5, 8, and 16)	¥ 101,509	¥ 121,440	\$ 1,167,692
Notes and accounts receivable - trade (Note 5)	52,819	59,286	570,058
Allowance for doubtful receivables	(166)	(164)	(1,577)
Inventories (Note 9)	81,989	60,864	585,231
Other current assets (Notes 5 and 7)	5,332	4,974	47,827
Total current assets	241,483	246,400	2,369,231
Property, plant and equipment (Note 10):			
Land	11,468	11,400	109,615
Building and structures	162,686	163,577	1,572,856
Machinery and equipment	705,925	710,833	6,834,933
Construction in progress	12,423	19,532	187,808
Total property, plant and equipment	892,502	905,342	8,705,212
Accumulated depreciation	(533,820)	(549,614)	(5,284,750)
Net property, plant and equipment	358,682	355,728	3,420,462
Intangible assets (Note 10):			
Intangible assets	7,306	5,208	50,077
Investments and other assets:			
Investment securities (Notes 5 and 6)	49,037	43,833	421,471
Investment in affiliates (Note 6)	3,441	3,602	34,635
Deferred tax assets (Note 12)	2,318	1,847	17,760
Other assets	2,534	1,522	14,634
Total investments and other assets	57,330	50,804	488,500
Total assets	¥ 664,801	¥ 658,140	\$ 6,328,270

The accompanying notes to the consolidated financial statements are an integral part of these statements.

LIABILITIES AND NET ASSETS

	Millions of yen		Thousands of U.S. dollars (Note 1)
	December 31, 2019	December 31, 2020	December 31, 2020
Current liabilities:			
Short-term debt, including current portion of long-term debt (Notes 5 and 11)	¥ 35,875	¥ 49,019	\$ 471,337
Notes and accounts payable (Note 5):			
Trade	34,893	28,502	274,058
Construction and other	9,788	9,018	86,712
Accrued expenses	10,884	9,884	95,038
Accrued income taxes	1,356	1,534	14,750
Reserve for business structure improvement	–	1,270	12,212
Reserve for loss on plant closing	1,047	865	8,317
Other reserves	61	157	1,510
Other current liabilities (Notes 5 and 7)	2,581	3,328	31,999
Total current liabilities	96,485	103,577	995,933
Long-term liabilities:			
Long-term debt (Notes 5 and 11)	64,604	54,668	525,654
Deferred tax liabilities (Note 12)	10,278	9,226	88,712
Reserve for special repairs	11,867	9,342	89,827
Other reserves	19	20	192
Net liabilities for severance and retirement benefits (Note 14)	940	1,036	9,962
Other long-term liabilities (Notes 5, 7, and 13)	3,453	3,351	32,221
Total long-term liabilities	91,161	77,643	746,568
Net assets (Note 15):			
Shareholders' equity:			
Common stock			
Authorized – 240,000,000 shares in Dec. 2019 and Dec. 2020			
Issued – 99,523,246 shares in Dec. 2019 and Dec. 2020	32,156	32,156	309,192
Capital surplus	34,358	34,311	329,913
Retained earnings	405,560	411,137	3,953,240
Treasury stock at cost			
2,904,626 shares in Dec. 2019			
2,882,008 shares in Dec. 2020	(10,258)	(10,178)	(97,865)
Total shareholders' equity	461,816	467,426	4,494,480
Accumulated other comprehensive income:			
Valuation difference on available-for-sale securities	21,148	18,776	180,538
Deferred gains on hedges	48	98	943
Foreign currency translation adjustments	(10,981)	(14,101)	(135,586)
Total accumulated other comprehensive income	10,215	4,773	45,895
Noncontrolling interests	5,124	4,721	45,394
Total net assets	477,155	476,920	4,585,769
Contingent liabilities (Note 17)			
Total liabilities and net assets	¥ 664,801	¥ 658,140	\$ 6,328,270

Consolidated Statements of Operations

 Nippon Electric Glass Co., Ltd. and Consolidated Subsidiaries
 Years Ended December 31, 2019 and 2020

	Millions of yen		Thousands of U.S. dollars (Note 1)
	December 31, 2019	December 31, 2020	December 31, 2020
Net sales	¥ 257,511	¥ 242,886	\$ 2,335,442
Cost of sales	202,623	191,430	1,840,673
Gross profit	54,888	51,456	494,769
Selling, general and administrative expenses	38,630	33,795	324,952
Operating profit	16,258	17,661	169,817
Other income (expenses):			
Interest and dividend income	1,975	1,813	17,433
Interest expense	(696)	(587)	(5,644)
Depreciation of idle property, plant and equipment	(584)	(1,228)	(11,808)
Loss on disposal of fixed assets	(249)	(481)	(4,625)
Subsidy income	440	477	4,587
Loss on impairment (Note 10)	(34,775)	(2,419)	(23,260)
Reversal of reserve for special repairs	4,394	2,942	28,288
Gain on sales of investment securities	15	2,592	24,923
Foreign exchange gains (losses)	(1,604)	936	9,000
Loss on accident	(3,756)	(1,526)	(14,673)
Restructuring expense	(48)	(1,336)	(12,846)
Other, net (Note 6)	(638)	1,053	10,125
Total other income (expenses)	(35,526)	2,236	21,500
Profit (loss) before income taxes	(19,268)	19,897	191,317
Income taxes (Note 12):			
Current	2,672	3,937	37,855
Deferred	11,298	435	4,183
Total income taxes	13,970	4,372	42,038
Profit (loss)	(33,238)	15,525	149,279
Profit attributable to noncontrolling interests	432	272	2,615
Profit (loss) attributable to owners of the parent	¥ (33,670)	¥ 15,253	\$ 146,664
	Yen		U.S. dollars (Note 1)
Amount per share of common stock:			
Profit (loss) attributable to owners of the parent (Note 2)	¥ (348.50)	¥ 157.84	\$ 1.52
Diluted profit (loss) attributable to owners of the parent (Note 2)	–	–	–
Cash dividends applicable to the year (Note 15)	100.00	100.00	0.96

The accompanying notes to the consolidated financial statements are an integral part of these statements.

Consolidated Statements of Comprehensive Income

 Nippon Electric Glass Co., Ltd. and Consolidated Subsidiaries
 Years Ended December 31, 2019 and 2020

	Millions of yen		Thousands of U.S. dollars (Note 1)
	December 31, 2019	December 31, 2020	December 31, 2020
Profit (loss)	¥ (33,238)	¥ 15,525	\$ 149,279
Other comprehensive income (loss) (Note 4)			
Valuation difference on available-for-sale securities	1,666	(2,372)	(22,808)
Deferred gains (losses) on hedges	(61)	50	481
Foreign currency translation adjustments	(2,647)	(3,153)	(30,317)
Share of other comprehensive income (loss) of associates accounted for using equity method	(73)	33	317
Total other comprehensive income (loss)	(1,115)	(5,442)	(52,327)
Comprehensive income (loss)	¥ (34,353)	¥ 10,083	\$ 96,952
Comprehensive income (loss) attributable to:			
Owners of the parent	¥ (34,785)	¥ 9,811	\$ 94,337
Noncontrolling interests	432	272	2,615

The accompanying notes to the consolidated financial statements are an integral part of these statements.

Consolidated Statements of Changes in Net Assets

Nippon Electric Glass Co., Ltd. and Consolidated Subsidiaries
Years Ended December 31, 2019 and 2020

	Thousands of shares	Millions of yen								
	Number of shares of common stock issued	Common stock	Capital surplus	Retained earnings	Treasury stock	Valuation difference on available-for-sale securities	Deferred gains (losses) on hedges	Foreign currency translation adjustments	Non-controlling interests	Total net assets
Balance at January 1, 2019	99,523	¥ 32,156	¥ 34,365	¥ 448,909	¥ (10,308)	¥ 19,482	¥109	¥ (8,261)	¥ 5,096	¥ 521,548
Loss attributable to owners of the parent	—	—	—	(33,670)	—	—	—	—	—	(33,670)
Cash dividends paid	—	—	—	(9,662)	—	—	—	—	—	(9,662)
Acquisition of treasury stock	—	—	—	—	(0)	—	—	—	—	(0)
Disposition of treasury stock	—	—	(7)	—	50	—	—	—	—	43
Other	—	—	—	(17)	—	—	—	—	—	(17)
Net changes in items other than shareholders' equity	—	—	—	—	—	1,666	(61)	(2,720)	28	(1,087)
Balance at January 1, 2020	99,523	¥ 32,156	¥ 34,358	¥ 405,560	¥ (10,258)	¥ 21,148	¥ 48	¥ (10,981)	¥ 5,124	¥ 477,155
Profit attributable to owners of the parent	—	—	—	15,253	—	—	—	—	—	15,253
Cash dividends paid	—	—	—	(9,663)	—	—	—	—	—	(9,663)
Acquisition of treasury stock	—	—	—	—	(1)	—	—	—	—	(1)
Disposition of treasury stock	—	—	(47)	—	81	—	—	—	—	34
Other	—	—	—	(13)	—	—	—	—	—	(13)
Net changes in items other than shareholders' equity	—	—	—	—	—	(2,372)	50	(3,120)	(403)	(5,845)
Balance at December 31, 2020	99,523	¥ 32,156	¥ 34,311	¥ 411,137	¥ (10,178)	¥ 18,776	¥ 98	¥ (14,101)	¥ 4,721	¥ 476,920

	Thousands of U.S. dollars (Note 1)									
	Common stock	Capital surplus	Retained earnings	Treasury stock	Valuation difference on available-for-sale securities	Deferred gains (losses) on hedges	Foreign currency translation adjustments	Non-controlling interests	Total net assets	
Balance at January 1, 2020	\$ 309,192	\$ 330,365	\$ 3,899,615	\$ (98,634)	\$ 203,346	\$ 462	\$ (105,586)	\$ 49,269	\$ 4,588,029	
Profit attributable to owners of the parent	—	—	146,663	—	—	—	—	—	146,663	
Cash dividends paid	—	—	(92,913)	—	—	—	—	—	(92,913)	
Acquisition of treasury stock	—	—	—	(10)	—	—	—	—	(10)	
Disposition of treasury stock	—	(452)	—	779	—	—	—	—	327	
Other	—	—	(125)	—	—	—	—	—	(125)	
Net changes in items other than shareholders' equity	—	—	—	—	(22,808)	481	(30,000)	(3,875)	(56,202)	
Balance at December 31, 2020	\$ 309,192	\$ 329,913	\$ 3,953,240	\$ (97,865)	\$ 180,538	\$ 943	\$ (135,586)	\$ 45,394	\$ 4,585,769	

The accompanying notes to the consolidated financial statements are an integral part of these statements.

Consolidated Statements of Cash Flows

Nippon Electric Glass Co., Ltd. and Consolidated Subsidiaries
Years Ended December 31, 2019 and 2020

	Millions of yen		Thousands of U.S. dollars (Note 1)
	December 31, 2019	December 31, 2020	December 31, 2020
Cash flows from operating activities:			
Profit (loss) before income taxes	¥ (19,268)	¥ 19,897	\$ 191,317
Depreciation and amortization	28,576	24,932	239,731
Loss on impairment	34,775	2,419	23,260
Gain on sales of investment securities	(15)	(2,592)	(24,923)
Decrease in reserve for special repairs	(5,908)	(2,525)	(24,279)
Interest and dividend income	(1,975)	(1,813)	(17,433)
Interest expense	695	587	5,644
Foreign exchange losses (gains)	1,107	(769)	(7,394)
Decrease (increase) in notes and accounts receivable, trade	3,074	(5,442)	(52,327)
Decrease (increase) in inventories	(14,210)	20,208	194,308
Decrease in notes and accounts payable, trade	(3,513)	(7,391)	(71,067)
Other, net	440	1,506	14,480
Subtotal	23,778	49,017	471,317
Interest and dividends received	1,943	1,827	17,567
Interest paid	(771)	(631)	(6,067)
Proceeds from insurance claim income	616	377	3,626
Income taxes paid	(3,929)	(2,728)	(26,231)
Net cash provided by operating activities	21,637	47,862	460,212
Cash flows from investing activities:			
Proceeds from sales of marketable and investment securities	125	4,434	42,635
Purchases of property, plant and equipment	(13,963)	(25,171)	(242,029)
Purchase of shares of subsidiaries resulting in change in scope of consolidation	(202)	—	—
Other, net	(277)	977	9,394
Net cash used in investing activities	(14,317)	(19,760)	(190,000)
Cash flows from financing activities:			
Increase (decrease) in short-term debt, net	(697)	116	1,115
Proceeds from long-term borrowings	1,225	16,233	156,087
Repayment of long-term borrowings	(11,759)	(3,048)	(29,307)
Proceeds from issuance of unsecured bonds	10,000	—	—
Redemption of unsecured bonds	(10,000)	(10,000)	(96,154)
Cash dividends paid	(9,662)	(9,660)	(92,885)
Cash dividends paid to noncontrolling interests	(593)	(674)	(6,481)
Other, net	(490)	(706)	(6,788)
Net cash used in financing activities	(21,976)	(7,739)	(74,413)
Effect of exchange rate changes on cash and cash equivalents	(616)	(125)	(1,202)
Net increase (decrease) in cash and cash equivalents	(15,272)	20,238	194,597
Cash and cash equivalents at beginning of year	116,249	100,977	970,932
Cash and cash equivalents at end of year (Note 8)	¥ 100,977	¥ 121,215	\$ 1,165,529

The accompanying notes to the consolidated financial statements are an integral part of these statements.

Notes to Consolidated Financial Statements

Nippon Electric Glass Co., Ltd. and Consolidated Subsidiaries

1. Basis of presenting consolidated financial statements

The accompanying consolidated financial statements of Nippon Electric Glass Co., Ltd. ("the Company") and its consolidated subsidiaries have been prepared in accordance with the provisions set forth in the Japanese Financial Instruments and Exchange Law and its related accounting regulations and in conformity with accounting principles generally accepted in Japan ("Japanese GAAP"), which are different in certain respects as to application and disclosure requirements from International Financial Reporting Standards ("IFRS").

The accompanying consolidated financial statements have been restructured and translated into English with certain expanded disclosures from the consolidated financial statements of the Company prepared in accordance with Japanese GAAP and filed with the appropriate Local Finance Bureau of the Ministry of Finance as required by the Japanese Financial Instruments and Exchange Law. Certain supplementary information included in the statutory Japanese language consolidated financial statements, but not required for fair presentation, is not presented in the accompanying consolidated financial statements.

The translations of Japanese yen amounts into U.S. dollar amounts are included solely for the convenience of the readers outside Japan, using the prevailing exchange rate at December 31, 2020, which was ¥104 to U.S. \$1.00. The translations, provided for convenience, should not be construed as representations that the Japanese yen amounts have been, could have been or could in the future be converted into U.S. dollars at this or any other rate of exchange.

2. Significant accounting policies

(a) Consolidation policies

Under Japanese GAAP, companies are required to consolidate all significant equity investments over which they have the power of control through a majority of voting rights or the existence of certain other conditions evidencing control.

The accompanying consolidated financial statements include the accounts of the Company and substantially all of its subsidiaries. All significant intercompany transactions and account balances are eliminated upon consolidation.

Investments in unconsolidated subsidiaries and affiliates are accounted for by the equity method or by cost. If the equity method of accounting had been applied to the investments in the companies accounted for by cost, the effect on the accompanying consolidated financial statements would not have been material.

(b) Translation of foreign currencies

All short-term and long-term monetary receivables and payables denominated in foreign currencies are translated into Japanese yen at the relevant exchange rates at the balance sheet date.

The financial statements of the Company's overseas consolidated subsidiaries are translated into Japanese yen at the current rates for assets and liabilities and at historical rates for shareholders' equity accounts. Average yearly rates are used for the translation of income and expense amounts. Foreign currency translation adjustments are recorded in net assets.

(c) Cash and cash equivalents

In preparing the consolidated statements of cash flows, cash on hand, deposits placed with banks on demand and short-term highly liquid investments with maturities of three months or less when deposited or purchased are considered to be cash and cash equivalents.

(d) Marketable and investment securities

Available-for-sale securities with observable fair market values are stated at fair market value. Unrealized gains and losses on these securities are reported, net of applicable income taxes, as a separate component of net assets. Realized gains and losses on the sale of such securities are calculated using moving average cost.

(e) Allowance for doubtful receivables

Allowance for doubtful receivables is provided in an amount sufficient to cover possible losses on collection. For regular receivables, it consists of an estimated amount based on the historical ratio of bad debt losses. For receivables from customers in financial difficulty, it consists of the estimated uncollectable amounts of specific doubtful receivables.

(f) Inventories

Inventories are stated principally at the lower of cost or net realized value, with cost determined by the moving average method.

(g) Property, plant and equipment (except for leased property)

Property, plant and equipment are stated at cost.

Depreciation of property, plant and equipment of the Company and its domestic consolidated subsidiaries is calculated by the declining balance method at rates based on the estimated useful life of the assets. Buildings, excluding facilities attached to buildings, acquired after March 31, 1998, are depreciated using the straight-line method. Facilities attached to buildings and structures acquired after March 31, 2016 are also depreciated using the straight-line method. Depreciation of property, plant and equipment of overseas consolidated subsidiaries is calculated principally by the straight-line method based on the estimated useful life of the assets. The estimated useful life of machinery and equipment is generally from 6 to 9 years.

(h) Intangible assets (except for leased property)

Intangible assets are amortized by the straight-line method.

(i) Reserve for directors' bonuses

To provide a reserve for directors' bonuses, the Company and its consolidated subsidiaries ("the Group") record the amount estimated to be paid to directors after the balance sheet date for their services rendered during the fiscal period.

(j) Severance and retirement benefits

The Company and its consolidated subsidiaries, excluding certain consolidated subsidiaries, principally use a simplified method for calculating projected benefit obligation which provides for accrued retirement benefits for voluntary retirement at the end of the fiscal year because few employees have applied for the defined benefit pension plans.

In certain consolidated subsidiaries, the allowance for employees' severance and retirement benefits is recognized in an amount after deducting plan assets from retirement benefits for the net defined benefit liability. Net defined benefit liability and retirement benefit costs are as follows.

(1) Allocation of projected retirement benefit obligation

In calculating the retirement benefit obligation, the benefit formula method is used to allocate the projected retirement benefit obligation to the estimated years of service of the eligible employees.

(2) Method for amortizing actuarial gain or loss

Depending on each company's situation, actuarial gain or loss is amortized at the time of occurrence.

(k) Directors' retirement benefits

To provide for directors' retirement benefits, the Company and its consolidated subsidiaries had recorded the amount that was required by internal corporate policy at the end of the current fiscal year. However, the directors' retirement benefits system was abolished in June 2004, and the Company has ceased recording these provisions since July 2004.

(l) Reserve for special repairs

To prepare for the significant recurring repairs required of glass-melting furnaces, estimated costs for the next repairs are accrued within the period between the previous repair and the next envisioned repair.

(m) Reserve for loss on plant closing

To provide for loss on plant closing, the Company recorded the estimated cost of closing the plant.

(n) Reserve for business structure improvement

To provide for the potential loss associated with future reductions of the consolidated subsidiaries' workforce as part of business restructuring, the Company recorded the estimated cost of completing business restructuring.

(o) Income taxes

The tax effects of loss carryforwards and temporary differences between the financial statement basis and the tax basis of assets and liabilities are recognized as deferred tax assets and liabilities. The provision for income taxes is computed based on the pretax income included in the consolidated statements of operations.

(p) Research and development

Costs related to research and development activities are charged to income as incurred and amounted to ¥6,901 million and ¥6,259 million (\$60,183 thousand) for the fiscal years ended December 31, 2019 and 2020, respectively.

(q) Profit (loss) attributable to owners of the parent per share

The computations of profit (loss) attributable to the owners of the parent per share are based on the average number of shares of common stock outstanding during each year. Diluted profit attributable to the owners of the parent per share of common stock is computed based on the average number of shares outstanding increased by the number of shares that would be outstanding assuming all dilutive convertible bonds were converted at the beginning of the year at the current conversion price.

Diluted profit attributable to the owners of the parent per share has not been presented for the year ended December 31, 2019 because the Company and its consolidated subsidiaries recorded loss attributable to the owners of the parent and there were no potentially dilutive shares of common stock. Diluted profit attributable to the owners of the parent per share has not been presented for the year ended December 31, 2020 because there were no potentially dilutive shares of common stock.

(r) Derivatives and hedge accounting

The Company and its consolidated subsidiaries state derivative financial instruments at fair value and recognize changes in the fair value as gain or loss, unless the derivative financial instruments are used for hedging purposes.

Forward foreign exchange contracts and interest rate swap contracts that meet the criteria for hedge accounting as provided in the "Accounting Standard for Financial Instruments" are accounted for using deferral hedge accounting, which requires unrealized gain or loss to be deferred as net unrealized gain or loss on the contract as a component of net assets until the loss or gain related to the hedged item is actually recognized.

The Company and its consolidated subsidiaries enter into forward foreign exchange contracts and interest rate swap contracts to hedge the risk of exchange rate fluctuations in forecasted foreign currency transactions and fluctuations in interest rates on borrowings, respectively. For forecasted foreign currency transactions, the suitability for hedging is confirmed by pre-testing and post-testing with consideration for whether the execution of the transaction is highly likely. The Company and its consolidated subsidiaries use derivative transactions solely for the purpose of managing risks and not for speculation. The counterparties are major financial institutions. Therefore, the Company and its consolidated subsidiaries consider the credit risk to be minimal. The derivative transactions are entered into by each company in accordance with accounting policies and decisions made by each company's management.

(s) Goodwill

Goodwill is amortized by the straight-line method over the period it is expected to have an effect.

(t) Reclassification

Certain prior period amounts have been reclassified to conform to the current year presentation. These reclassifications had no significant impact on the previously reported results of operations or retained earnings.

3. Additional information

Impact of COVID-19

The impact of COVID-19 on the Company and its consolidated subsidiaries has been temporary. Demand for the products of the Company and its consolidated subsidiaries started to recover after it reached the lowest point during the second quarter of the fiscal year ended December 31, 2020.

For the next fiscal year and subsequent years, the Company has developed estimates for items such as the impairment of property, plant and equipment based on the assumption that COVID-19 will not significantly impact its businesses.

However, due to the uncertainties surrounding the impact of COVID-19, the assumption and reality may differ, and as a result, COVID-19 may affect the Company and its consolidated subsidiaries' financial situations and operating results.

4. Accounting standards for presentation of comprehensive income

The components of other comprehensive income for the fiscal years ended December 31, 2019 and 2020 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Valuation difference on available-for-sale securities			
Increase (decrease) during the year	¥ 2,447	¥ (769)	\$ (7,395)
Reclassification adjustments	(15)	(2,487)	(23,913)
Subtotal, before tax	2,432	(3,256)	(31,308)
Tax (expense) benefit	(766)	884	8,500
Subtotal, net of tax	1,666	(2,372)	(22,808)
Deferred gains (losses) on hedges			
Increase during the year	195	164	1,577
Reclassification adjustments	(202)	(156)	(1,500)
Subtotal, before tax	(7)	8	77
Tax (expense) benefit	(54)	42	404
Subtotal, net of tax	(61)	50	481
Foreign currency translation adjustments			
Decrease during the year	(2,647)	(3,153)	(30,317)
Share of other comprehensive income of entities accounted for using equity method			
Increase (decrease) during the year	(73)	33	317
Total other comprehensive income (loss)	¥ (1,115)	¥ (5,442)	\$ (52,327)

5. Financial instruments

(a) Status of financial instruments

(1) Policy on financial instruments

As a Group policy, the Company and its consolidated subsidiaries restrict investments of surplus cash, if any, to safe financial assets such as bank deposits. Funds required by the Company are obtained mainly through bank borrowings and the issuance of bonds. Derivatives are used to avoid the risks described below and are not entered into for speculative purposes.

(2) Details of financial instruments, associated risks and risk management structure

Notes and accounts receivable - trade, which are operating receivables, are exposed to customer credit risk. The Company, pursuant to the Company's Credit Control Regulations, manages credit risk by managing the due dates and outstanding balances of each counterparty and by monitoring the credit status of major counterparties. Consolidated subsidiaries perform similar procedures in conformity with the Company's Credit Control Regulations.

Operating receivables denominated in foreign currencies, which arise from the Company's global business development, are exposed to foreign exchange fluctuation risk. The Group enters into forward foreign exchange contracts mainly for accounts receivable associated with export transactions of finished goods to manage fluctuation in future foreign exchange rates.

Investment securities consist mainly of equity securities of companies with which companies in the Group have business relationships and are exposed to market price fluctuation risk. The Company, pursuant to the Company's Shareholdings Regulations, monitors the fair values of such securities and regularly reviews its holdings.

Notes and accounts payable - trade, which are operating debt, are settled within one year.

Regarding borrowings, short-term debt is issued mainly to obtain funds for operating transactions, and bonds and long-term debt are issued mainly for capital expenditures. Some borrowings have floating interest rates and are exposed to interest rate fluctuation risk against which long-term debt is partially hedged through interest rate swap contracts.

For details regarding hedge accounting of derivatives such as hedging instruments and hedged items and hedging policy, refer to Note 2 (r), "Significant accounting policies - Derivatives and hedge accounting."

Matters regarding derivative transactions are determined by executives in charge of accounting at each consolidated Group company in accordance with the regulations of each company. Approval for transactions that exceed a certain scope is granted by the Company's management committee. Operations and management pertaining to the execution of derivative transactions are carried out by each company's accounting department, and such operations are managed through a check and balance system. With derivative transactions, the Company enters into contracts only with financial institutions with high ratings to reduce credit risk.

Operating debt and borrowings are exposed to liquidity risks. The Group manages such risks by cash management forecasting at each Group company.

(3) Supplementary explanation for fair values of financial instruments

The notional amounts of derivatives in Note 7, "Derivatives," does not indicate the market risks pertaining to the derivatives themselves.

(b) Fair values of financial instruments

The tables below show the book values of financial instruments recorded in the consolidated balance sheet, their fair values and any differences between the book value and fair value as of December 31, 2019 and 2020. Financial instruments whose fair values were deemed to be extremely difficult to estimate were not included. (See in the notes to the tables below – Note 3, “Financial instruments whose fair values are deemed to be extremely difficult to estimate.”)

2019/12	Millions of yen		
	Book value	Fair value	Difference
(1) Cash and time deposits	¥ 101,509	¥ 101,509	¥ –
(2) Notes and accounts receivable - trade	52,819	52,819	–
(3) Investment securities:			
Other securities	49,035	49,035	–
(4) Short-term debt:			
Short-term debt	(22,818)	(22,818)	–
Current portion of long-term debt	(3,057)	(3,084)	(27)
Current portion of unsecured bonds	(10,000)	(10,016)	(16)
(5) Notes and accounts payable – trade	(34,893)	(34,893)	–
(6) Long-term debt:			
Unsecured bonds	(20,000)	(20,057)	(57)
Long-term borrowings	(44,604)	(44,670)	(66)
(7) Derivatives			
Derivatives accounted for with hedge accounting	458	458	–

2020/12	Millions of yen		
	Book value	Fair value	Difference
(1) Cash and time deposits	¥ 121,440	¥ 121,440	¥ –
(2) Notes and accounts receivable - trade	59,286	59,286	–
(3) Investment securities:			
Other securities	43,831	43,831	–
(4) Short-term debt:			
Short-term debt	(22,712)	(22,712)	–
Current portion of long-term debt	(26,307)	(26,350)	(43)
(5) Notes and accounts payable – trade	(28,502)	(28,502)	–
(6) Long-term debt:			
Unsecured bonds	(20,000)	(20,033)	(33)
Long-term borrowings	(34,668)	(34,983)	(315)
(7) Derivatives			
Derivatives accounted for with hedge accounting	282	282	–

2020/12	Thousands of U.S. dollars		
	Book value	Fair value	Difference
(1) Cash and time deposits	\$ 1,167,692	\$ 1,167,692	\$ –
(2) Notes and accounts receivable - trade	570,058	570,058	–
(3) Investment securities:			
Other securities	421,452	421,452	–
(4) Short-term debt:			
Short-term debt	(218,385)	(218,385)	–
Current portion of long-term debt	(252,952)	(253,365)	(413)
Current portion of unsecured bonds	–	–	–
(5) Notes and accounts payable – trade	(274,058)	(274,058)	–
(6) Long-term debt:			
Unsecured bonds	(192,308)	(192,625)	(317)
Long-term borrowings	(333,346)	(336,375)	(3,029)
(7) Derivatives			
Derivatives accounted for with hedge accounting	2,711	2,711	–

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Notes: Fair value measurements of financial instruments and matters regarding marketable securities and derivatives

1. Amounts for "Book value" and "Fair value" in parentheses indicate net liabilities.
2. Measurements of fair value for financial instruments and matters regarding marketable securities and derivatives
 - (1) Cash and time deposits and (2) Notes and accounts receivable - trade
The fair value of these items approximates the book value because of their short-term nature. Thus, the book value is used as the fair value.
 - (3) Investment securities
The fair value of equity securities is based on market prices on public exchanges.
For information on investment securities, refer to Note 6, "Marketable and investment securities."
 - (4) Short-term debt and (5) Notes and accounts payable - trade
The fair value of these items, excluding the current portion of long-term debt and unsecured bonds, approximates the book value because of their short-term nature. Thus, the book value is used as the fair value. The current portion of long-term debt and unsecured bonds, which are included in short-term debt, is measured by the methods used in "(6) Long-term debt" below and classified as such.

(6) Long-term debt
The fair value of unsecured bonds issued by the Company is based on the market price if available and the present value calculated by discounting the total amount of principle and interest outstanding at an appropriate rate considering the time to maturity and the credit risk if the market price is not available.

The fair value of long-term borrowings is measured by discounting the total amount of principle and interest outstanding at an estimated interest rate for similar new borrowings.

(7) Derivatives
Refer to Note 7, "Derivatives."

3. Financial instruments whose fair values are deemed to be extremely difficult to estimate

Equity securities issued by affiliates, investments in capital of subsidiaries and associates and nonlisted equity securities are not included in "(3) Investment securities" because their fair values were deemed extremely difficult to estimate, they had no quoted market prices and it was not possible to estimate their future cash flows. For information related to these securities, refer to Note 6, "Marketable and investment securities."

6. Marketable and investment securities

(a) Acquisition cost and book value of securities with observable market values at December 31, 2019 and 2020 were as follows:

2019/12	Millions of yen		
	Acquisition cost	Book value	Difference
Available-for-sale securities:			
Securities with book value exceeding acquisition cost:			
Equity securities	¥ 19,190	¥ 48,000	¥ 28,810
Securities with book value not exceeding acquisition cost:			
Equity securities	1,101	1,035	(66)
	¥ 20,291	¥ 49,035	¥ 28,744

2020/12	Millions of yen		
	Acquisition cost	Book value	Difference
Available-for-sale securities:			
Securities with book value exceeding acquisition cost:			
Equity securities	¥ 17,661	¥ 43,198	¥ 25,537
Securities with book value not exceeding acquisition cost:			
Equity securities	682	633	(49)
	¥ 18,343	¥ 43,831	¥ 25,488

2020/12	Thousands of U.S. dollars		
	Acquisition cost	Book value	Difference
Available-for-sale securities:			
Securities with book value exceeding acquisition cost:			
Equity securities	\$ 169,817	\$ 415,365	\$ 245,548
Securities with book value not exceeding acquisition cost:			
Equity securities	6,558	6,087	(471)
	\$ 176,375	\$ 421,452	\$ 245,077

(b) Book values of securities with no available market values at December 31, 2019 and 2020 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Available-for-sale securities:			
Equity securities issued by affiliates	¥ 1,684	¥ 1,684	\$ 16,192
Investments in capital of subsidiaries and associates	1,757	1,918	18,443
Nonlisted equity securities, other	2	2	19
	¥ 3,443	¥ 3,604	\$ 34,654

(c) Sales of available-for-sale securities sold in the years ended December 31, 2019 and 2020 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Total sales amounts	¥ 125	¥ 4,434	\$ 42,635
Gains on sales	15	2,592	24,923

(d) Impairment loss on investment securities

There was no impairment loss on investment securities in the year ended December 31, 2019. The Company recognized impairment loss of ¥106 million (\$1,019 thousand) on investment securities for the fiscal year ended December 31, 2020.

If the fair market value as of the end of each financial quarter has declined by more than 30% from the acquisition cost, impairment loss on investment securities is recognized.

7. Derivatives

The fair values of derivative contracts used by the Company and its consolidated subsidiaries at December 31, 2019 and 2020 were as follows:

Derivative transactions to which hedge accounting has been applied

(a) Currency related transactions

2019/12			Millions of yen		
Method of hedge accounting	Type of transaction	Hedged item	Notional amount	Portion due after 1 year	Fair value
Deferral hedge accounting	Forward foreign exchange				
	Sell	Forecasted transactions for accounts receivable denominated in foreign currencies	¥ 41,661	¥ 7,925	¥ 521
	Buy	Forecasted transactions for accounts payable denominated in foreign currencies	102	—	0
			¥ 41,763	¥ 7,925	¥ 521

2020/12			Millions of yen		
Method of hedge accounting	Type of transaction	Hedged item	Notional amount	Portion due after 1 year	Fair value
Deferral hedge accounting	Forward foreign exchange				
	Sell	Forecasted transactions for accounts receivable denominated in foreign currencies	¥ 35,154	¥ 6,174	¥ 294
	Buy	Forecasted transactions for accounts payable denominated in foreign currencies	129	—	(1)
			¥ 35,283	¥ 6,174	¥ 293

2020/12			Thousands of U.S. dollars		
Method of hedge accounting	Type of transaction	Hedged item	Notional amount	Portion due after 1 year	Fair value
Deferral hedge accounting	Forward foreign exchange				
	Sell	Forecasted transactions for accounts receivable denominated in foreign currencies	\$ 338,020	\$ 59,365	\$ 2,827
	Buy	Forecasted transactions for accounts payable denominated in foreign currencies	1,240	—	(10)
			\$ 339,260	\$ 59,365	\$ 2,817

Note: Fair value is based on prices obtained from financial institutions.

(b) Interest related transactions

2019/12			Millions of yen		
Method of hedge accounting	Type of transaction	Hedged item	Notional amount	Portion due after 1 year	Fair value
Deferral hedge accounting	Interest rate swap	Interest on borrowings	¥ 10,000	¥ 10,000	¥ (63)

2020/12			Millions of yen		
Method of hedge accounting	Type of transaction	Hedged item	Notional amount	Portion due after 1 year	Fair value
Deferral hedge accounting	Interest rate swap	Interest on borrowings	¥ 10,000	¥ —	¥ (11)

2020/12			Thousands of U.S. dollars		
Method of hedge accounting	Type of transaction	Hedged item	Notional amount	Portion due after 1 year	Fair value
Deferral hedge accounting	Interest rate swap	Interest on borrowings	\$ 96,154	\$ —	\$ (106)

Note: Fair value is based on prices obtained from financial institutions.

8. Cash and cash equivalents

Cash and cash equivalents at December 31, 2019 and 2020 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Cash and time deposits on consolidated balance sheets	¥ 101,509	¥ 121,440	\$ 1,167,692
Time deposits due over three months	(532)	(225)	(2,163)
Cash and cash equivalents in consolidated statements of cash flows	¥ 100,977	¥ 121,215	\$ 1,165,529

9. Inventories

Inventories at December 31, 2019 and 2020 consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Finished and purchased goods	¥ 52,552	¥ 35,318	\$ 339,596
Work-in-process	3,141	2,359	22,683
Raw materials and others	26,296	23,187	222,952
	¥ 81,989	¥ 60,864	\$ 585,231

10. Loss on impairment

(a) Grouping

The Company and its consolidated subsidiaries group operating assets by business unit for which the profit or loss is continually controlled to measure the impairment of the assets. Important idle assets which are not used for business are grouped by project.

(b) Details of loss on impairment by fiscal year

(1) Fiscal year ended December 31, 2019

Use	Location	Type	Loss on impairment
			Millions of yen
			2019/12
Business assets for glass fiber	Electric Glass Fiber America, LLC	Goodwill	¥ 15,475
		Trademarks	1,695
		Others	2,693
		Subtotal	19,863
	Electric Glass Fiber NL, B.V.	Construction in progress	5,005
		Machinery and equipment	1,203
		Others	1,879
		Subtotal	8,087
	Electric Glass Fiber UK, Ltd.	Machinery and equipment	2,865
		Building and structures	1,484
Others		2,087	
Subtotal		6,436	
Significant idle assets	Notogawa plant, Shiga-Takatsuki plant, SGS Engineering Co., Ltd., other	Land	256
		Machinery and equipment	97
		Others	36
		Subtotal	389
Total			¥ 34,775

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- i. Business assets for glass fiber
 1. Reason to recognize impairment
Since the second half of 2018, market competition has intensified due mainly to weak demand in Europe and China. Due to circumstances in which the market recovery has been more gradual than expected, the subsidiaries in the U.S. and Europe glass fiber business have not been able to supplement the reduction in sales and increased costs from operational adjustments through internal efforts, causing the stagnation of profits to continue. As a result, the book values of the assets were written down to their recoverable values.
 2. Assessment of recoverable values
The recoverable values of business assets in the glass fiber business were based on the value in use or net selling price. The value in use was calculated by discounting the future cash flows to be derived from the assets to the present value. The discount rates used for calculating the value in use were 8.9% (before tax) and 7.5% (after tax). Net selling price was measured reasonably by market value.
- ii. Significant idle assets
 1. Reason to recognize impairment
Since there was no plan to use the certain idle assets, the book values of the assets were written down to their recoverable values.
 2. Assessment of recoverable values
The recoverable values of significant idle assets were based on net selling price. No recoverable values were expected for the production facilities of the glass manufacturing line due to the low probability of future alternative use and sales. The recoverable values of land were the price measured reasonably based on the roadside land prices by the outside expert.

The discount rates used for calculating the value in use were 8.9% (before tax) and 7.5% (after tax). Net selling price was measured reasonably by market value.

(2) Fiscal year ended December 31, 2020

Use	Location	Type	Loss on impairment	
			Millions of yen	Thousands of U.S. dollars
			2020/12	2020/12
Business assets for glass tubing for pharmaceutical and medical use, glass tubing for lighting and heat resistant glass	Otsu plant, Shiga-Takatsuki plant, other	Machinery and equipment	¥ 472	\$ 4,538
		Others	69	664
		Subtotal	541	5,202
Business assets for glass fiber	Electric Glass Fiber America, LLC	Trademarks	267	2,568
		Subtotal	267	2,568
Significant idle assets	Electric Glass Fiber America, LLC, Shiga-Takatsuki plant, OLED Material Solutions Co., Ltd.	Machinery and equipment	1,312	12,615
		Building and structures	295	2,837
		Others	4	38
		Subtotal	1,611	15,490
Total			¥ 2,419	\$ 23,260

- i. Business assets for glass tubing for pharmaceutical and medical use, glass tubing for lighting and heat resistant glass
 1. Reason to recognize impairment
For the manufacturing of glass tubing for pharmaceutical and medical use, glass tubing for lighting, and heat resistant glass, the improvements in production efficiency could not sufficiently offset the reduction in sales of some products. Therefore, the book values of the production facilities of these products were written down to their recoverable values.
 2. Assessment of recoverable values
The recoverable values of business assets for glass tubing for pharmaceutical and medical use, glass tubing for lighting, and heat resistant glass were based on the value in use.
The value in use was calculated by discounting the future cash flows to be derived from the assets to the present value.
 - ii. Business assets for glass fiber
 1. Reason to recognize impairment
The impairment test performed based on the accounting principles generally accepted in the U.S. revealed that the fair values of the trademarks of Electric Glass Fiber America, LLC, the Company's subsidiary, were below their book values. As a result, the book values were written down to the fair values.
 2. Assessment of recoverable values
The recoverable values of business assets for the glass fiber business were based on the fair value.
- In Sections i and ii above, the discount rates used for calculating the value in use and the fair value were 8.2% (before tax) and 8.0% (after tax).
- iii. Significant idle assets
 1. Reason to recognize impairment
Since there was no plan to use the certain idle assets, the book values of the assets were written down to their recoverable values.
 2. Assessment of recoverable values
The recoverable values of significant idle assets were based on net selling price. No recoverable values were expected for part of the production facilities of the glass manufacturing line due to the low probability of future diversion and sales. Net selling price was measured reasonably by market value.

11. Short-term and long-term debt

Short-term debt, including the current portion of long-term debt, at December 31, 2019 and 2020 consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Short-term bank borrowings, average rate 0.4% per annum	¥ 20,818	¥ 20,712	\$ 199,154
Commercial paper, average rate -0.0% per annum	2,000	2,000	19,231
Current portion of long-term borrowings, average rate 0.2% per annum	3,057	26,307	252,952
Current portion of unsecured bonds, average rate 0.3% per annum	10,000	—	—
	¥ 35,875	¥ 49,019	\$ 471,337

Average interest rate is the weighted average interest rate for amounts outstanding as of the fiscal year end.

Long-term debt at December 31, 2019 and 2020 consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Borrowings, principally from banks and insurance companies due from 2021 through 2026, average rate 0.3% per annum	¥ 47,661	¥ 60,975	\$ 586,298
0.3% unsecured bonds, due in 2020	10,000	—	—
0.6% unsecured bonds, due in 2022	10,000	10,000	96,154
0.3% unsecured bonds, due in 2026	10,000	10,000	96,154
	77,661	80,975	778,606
Less current portion of long-term borrowings	(3,057)	(26,307)	(252,952)
Less current portion of unsecured bonds	(10,000)	—	—
	¥ 64,604	¥ 54,668	\$ 525,654

The aggregate annual maturities of long-term debt at December 31, 2020 were as follows:

Years ending December 31	Millions of yen	Thousands of U.S. dollars
2021	¥ 26,307	\$ 252,952
2022	13,117	126,125
2023	13,735	132,067
2024	2,165	20,817
2025	15,631	150,298
2026	10,020	96,347
	¥ 80,975	\$ 778,606

For flexible financing purposes, the Company has committed credit facilities with certain banks. The maximum aggregate credit facility available to the Company is ¥25,000 million (\$240,385 thousand). The credit facility had not been used as of December 31, 2020.

12. Income taxes

The Company is subject to a number of taxes based on income, which, in the aggregate, indicate a statutory tax rate in Japan of approximately 30.5% for each of the fiscal years ended December 31, 2019 and 2020.

The significant differences between the statutory tax rate in Japan and the effective tax rate of the Company and its consolidated subsidiaries for financial statement purposes for the fiscal year ended December 31, 2020 were as follows:

	2019/12	2020/12
Statutory tax rate in Japan	–%	30.5%
Dividend income, other nontaxable income and expenses	–	(9.3)
Difference in tax rates for overseas consolidated subsidiaries	–	(2.8)
Undistributed profit of overseas consolidated subsidiaries	–	2.6
Effect of elimination of dividend income	–	7.0
Adjustments based on mutual agreements	–	(4.4)
Overseas withholding tax	–	1.6
Effect of elimination of unrealized gains	–	0.5
Movement of valuation allowance	–	(2.9)
Others	–	(0.8)
Effective tax rate	–%	22.0%

The details of the differences between the statutory tax rate and effective tax rate for the year ended December 31, 2019 were omitted because the Company recorded a loss before income taxes for the year.

Significant components of the Company's and its consolidated subsidiaries' deferred tax assets and liabilities as of December 31, 2019 and 2020 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Deferred tax assets:			
Tax losses carried forward	¥ 6,461	¥ 7,786	\$ 74,865
Depreciation in excess of tax limit	5,905	4,894	47,058
Goodwill	4,655	3,622	34,827
Reserve for special repairs	3,620	2,849	27,394
Capital allowances	2,308	2,522	24,250
Loss on devaluation of inventories	2,441	2,310	22,212
Unrealized gain on property, plant and equipment	2,356	2,181	20,971
Loss on valuation of investment securities	1,237	1,118	10,750
Unrealized gain on inventories	259	567	5,452
Accrued bonuses	374	358	3,442
Reserve for business structure improvement	-	317	3,048
Reserve for loss on plant closing	319	264	2,538
Others	3,187	2,830	27,212
Subtotal deferred tax assets	33,122	31,618	304,019
Valuation allowance for tax losses carried forward	(5,396)	(6,958)	(66,904)
Valuation allowance for deductible temporary differences	(18,798)	(14,825)	(142,548)
Total valuation allowance	(24,194)	(21,783)	(209,452)
Total deferred tax assets	8,928	9,835	94,567
Deferred tax liabilities:			
Depreciation of overseas consolidated subsidiaries	(6,156)	(6,879)	(66,144)
Valuation difference on available-for-sale securities	(7,596)	(6,712)	(64,538)
Undistributed profit of overseas consolidated subsidiaries	(2,585)	(3,108)	(29,885)
Others	(551)	(515)	(4,952)
Total deferred tax liabilities	(16,888)	(17,214)	(165,519)
Net deferred tax liabilities	¥ (7,960)	¥ (7,379)	\$ (70,952)

Note: Tax losses carried forward and their deferred tax assets by expiration period as of December 31, 2020 were as follows:

	Millions of yen		
	Tax losses carried forward	Valuation allowance for tax losses carried forward	Deferred tax assets
2021	¥ 146	¥ (113)	¥ 33
2022	–	–	–
2023	–	–	–
2024	273	(273)	–
2025	385	(385)	–
2026 and thereafter	6,982	(6,187)	795
Total	¥ 7,786	¥ (6,958)	¥ 828

	Thousands of U.S. dollars		
	Tax losses carried forward	Valuation allowance for tax losses carried forward	Deferred tax assets
2021	\$ 1,404	\$ (1,087)	\$ 317
2022	–	–	–
2023	–	–	–
2024	2,625	(2,625)	–
2025	3,702	(3,702)	–
2026 and thereafter	67,134	(59,490)	7,644
Total	\$ 74,865	\$ (66,904)	\$ 7,961

The amount of tax losses carried forward in the above table is after multiplying by the statutory tax rate.

13. Asset retirement obligations

(a) Asset retirement obligations recorded on the consolidated balance sheets

(1) Outline of asset retirement obligations

Recorded asset retirement obligations are expenses, such as the costs for the disposal of machinery and equipment owned by the Company that contain PCB (polychlorinated biphenyl) and the costs for the removal of asbestos from buildings owned by the Company when they are demolished.

(2) Basis for calculating asset retirement obligations

Asset retirement obligations are based on estimates provided by specialty companies such as construction companies.

(3) Changes in the total amount of asset retirement obligations during the fiscal years ended December 31, 2019 and 2020 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Beginning balance	¥ 286	¥ 277	\$ 2,663
Decrease due to the fulfillment of asset retirement obligations	(10)	(1)	(10)
Change in estimated asset retirement obligations	1	(22)	(211)
Ending balance	¥ 277	¥ 254	\$ 2,442

(b) Asset retirement obligations not recorded on the consolidated balance sheets

Regarding some plant sites and other properties used under real estate leasing agreements, the Company and its consolidated subsidiaries have obligations related to the cost of restoring such properties to their original state at the time of business termination or moving out. However, since there are uncertainties regarding the lease periods of the properties to which such obligations apply because there are no plans to terminate or move out at this time, it is impossible to reasonably estimate the related asset retirement obligations. Therefore, no asset retirement obligations are recorded in connection with such obligations.

14. Severance and retirement benefits

The Company and its domestic consolidated subsidiaries provide mainly defined contribution pension plans. However, certain employees are provided unfunded lump-sum payment plans. The overseas consolidated subsidiaries provide funded lump-sum payment plans, defined contribution pension plans and defined benefit pension plans.

For defined benefit pension plans, the reconciliation of opening and ending balances for projected benefit obligation for the fiscal years ended December 31, 2019 and 2020 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Projected benefit obligation at beginning of year	¥ (1,690)	¥ (967)	\$ (9,298)
Service cost	(231)	(88)	(846)
Interest cost	(34)	(15)	(144)
Actuarial differences	(4)	(27)	(260)
Benefits paid	150	28	269
Decrease from revision of retirement benefit plans	784	—	—
Others	58	4	38
Projected benefit obligation at end of year	¥ (967)	¥ (1,065)	\$ (10,241)

For defined benefit pension plans, the reconciliation of opening and ending balances for plan assets for the fiscal years ended December 31, 2019 and 2020 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Plan assets at beginning of year	¥ 24	¥ 27	\$ 260
Expected return on plan assets	0	0	0
Actuarial differences	1	1	10
Contributions paid by employer	2	1	9
Others	0	0	0
Plan assets at end of year	¥ 27	¥ 29	\$ 279

For defined benefit pension plans, the reconciliation of ending balances for projected benefit obligations and plan assets and the balances for net defined benefit liability recognized in the consolidated balance sheets for the fiscal years ended December 31, 2019 and 2020 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Projected benefit obligations of funded plans	¥ (663)	¥ (746)	\$ (7,173)
Plan assets	27	29	279
	(636)	(717)	(6,894)
Projected benefit obligation of unfunded plans	(304)	(319)	(3,068)
Net liabilities for severance and retirement benefits recognized in the consolidated balance sheets	(940)	(1,036)	(9,962)
Net defined benefit liability	(940)	(1,036)	(9,962)
Net liabilities for severance and retirement benefits recognized in the consolidated balance sheets	¥ (940)	¥ (1,036)	\$ (9,962)

For defined benefit pension plans, components of severance and retirement benefit expense for the fiscal years ended December 31, 2019 and 2020 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Service cost	¥ 231	¥ 88	\$ 846
Interest cost	34	15	144
Expected return on plan assets	(0)	(0)	(0)
Amortization of actuarial differences	3	26	250
Others	4	(4)	(38)
Severance and retirement benefit expense for defined benefit pension plans	¥ 272	¥ 125	\$ 1,202

For defined benefit pension plans, the percentage composition by asset class of total plan assets for the fiscal years ended December 31, 2019 and 2020 was as follows:

	2019/12	2020/12
Equity securities	45%	48%
Bonds	11%	9%
Others	44%	43%
Total	100%	100%

The current and expected allocation of plan assets as well as the current and expected long-term rates of return for the various assets that constitute the plan assets are considered when determining the long-term expected rate of return on plan assets.

For defined benefit pension plans, principal actuarial assumptions for the fiscal years ended December 31, 2019 and 2020 were as follows:

	2019/12	2020/12
Discount rates (mainly)	0.8–4.5%	0.8–4.5%
Long-term expected rates of return on plan assets	1.0%	0.8%
Expected rates of pay raises (mainly)	2.0–5.0%	2.0–5.0%

The total amounts that the Company and its consolidated subsidiaries needed to contribute to the defined contribution pension plans were ¥1,788 million and ¥1,888 million (\$18,154 thousand) for the fiscal years ended December 31, 2019 and 2020, respectively.

15. Net assets

Under Japanese laws and regulations, the entire amount paid for new shares is required to be designated as common shares. However, a company may, by a resolution of the Board of Directors, designate an amount not exceeding one half of the price of the new shares as additional paid-in capital, which is included in capital surplus.

Under The Japanese Corporate Law ("the Law"), in cases in which a dividend distribution of surplus takes place, the smaller of an amount equal to 10% of the dividend or the excess, if any, of 25% of common shares over the total of additional paid-in capital and legal earnings reserve must be set aside as additional paid-in capital or legal earnings reserve. The legal earnings reserve is included in retained earnings in the accompanying consolidated balance sheets. Under the Law, both of these appropriations generally require a resolution of the shareholders' meeting.

Additional paid-in capital and legal earnings reserve may not be distributed as dividends. Under the Law, all additional paid-in capital and all legal earnings reserve may be transferred to other capital surplus and retained earnings, which are potentially available for dividends, by a resolution of a shareholders' meeting.

The maximum amount that the Company can distribute as dividends is calculated based on the nonconsolidated financial statements of the Company in accordance with Japanese laws and regulations.

At the annual shareholders' meeting held on March 30, 2021, the shareholders approved cash dividends amounting to ¥4,832 million (\$46,462 thousand), or ¥50.00 per share. In addition, the Company paid interim cash dividends of ¥4,832 million (\$46,462 thousand), or ¥50.00 per share, on August 31, 2020.

16. Assets pledged as collateral and associated liabilities

Assets pledged as collateral and the associated liabilities at December 31, 2019 and 2020 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Assets pledged as collateral:			
Time deposits	¥ 296	¥ –	\$ –
Liabilities associated with assets pledged as collateral:			
Guarantee of liability	259	–	–

17. Contingent liabilities

Contingent liabilities at December 31, 2019 and 2020 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2019/12	2020/12	2020/12
Notes receivable discounted	¥ –	¥ 140	\$ 1,346
Guarantees of employees' housing loans	105	71	683
Guarantees of bank loans for affiliated company accounted for by the equity method	2,829	2,371	22,798

18. Segment information

Information by segment for the fiscal years ended December 31, 2019 and 2020 was as follows:

(a) Segment information (by management approach)
Outline of reportable segment

The Company has adopted a business division system in which each business division develops a comprehensive strategy for the products it handles and conducts business activities based on such strategy. The Board of Directors periodically reviews decisions regarding the allocation of management resources to each business division and evaluates business performance.

Although the Group may be considered to consist of multiple business segments that are handled by various business divisions, in general the “glass products” made by the Group companies are similar in terms of product characteristics, manufacturing methods, market and industry, customer type and marketing factors. Therefore, the Group has consolidated these segments into a single “Glass Business” segment. Accordingly, except for information given in the “Outline of reportable segment,” information for other segments has been omitted.

(b) Related information
(1) Information by products and services

2019/12	Millions of yen		
Sales to external customers	Glass Business		Total
	Electronics and Information Technology	Performance Materials and Others	
		¥ 134,414	¥ 123,097

2020/12	Millions of yen		
Sales to external customers	Glass Business		Total
	Electronics and Information Technology	Performance Materials and Others	
		¥ 136,197	¥ 106,689

2020/12	Thousands of U.S. dollars		
Sales to external customers	Glass Business		Total
	Electronics and Information Technology	Performance Materials and Others	
		\$ 1,309,587	\$ 1,025,855

(2) Geographical information

Net sales

2019/12						
Millions of yen						
Japan	China	South Korea	U.S.	Europe	Other areas	Total
¥ 42,375	¥ 69,635	¥ 44,921	¥ 38,613	¥ 30,713	¥ 31,254	¥ 257,511

2020/12						
Millions of yen						
Japan	China	South Korea	U.S.	Europe	Other areas	Total
¥ 38,117	¥ 77,108	¥ 38,314	¥ 30,859	¥ 27,313	¥ 31,175	¥ 242,886

2020/12						
Thousands of U.S. dollars						
Japan	China	South Korea	U.S.	Europe	Other areas	Total
\$ 366,510	\$ 741,423	\$ 368,404	\$ 296,721	\$ 262,625	\$ 299,759	\$ 2,335,442

Notes: 1. The classifications of countries and areas are based on the location of customers.
2. The main country classified as "Other areas" is Taiwan.

Property, plant and equipment

2019/12					
Millions of yen					
Japan	China	South Korea	Malaysia	Other areas	Total
¥ 190,018	¥ 56,572	¥ 43,373	¥ 38,062	¥ 30,657	¥ 358,682

2020/12					
Millions of yen					
Japan	China	South Korea	Malaysia	Other areas	Total
¥ 191,395	¥ 57,935	¥ 40,248	¥ 40,666	¥ 25,484	¥ 355,728

2020/12					
Thousands of U.S. dollars					
Japan	China	South Korea	Malaysia	Other areas	Total
\$ 1,840,337	\$ 557,067	\$ 387,000	\$ 391,019	\$ 245,039	\$ 3,420,462

Notes: 1. The classifications of countries and areas are based on the location of property, plant and equipment.
2. The main countries classified as "Other areas" are the U.S. and the countries in Europe.

(3) Information by major customers

Sales

	Millions of yen		Thousands of U.S. dollars	Related segment
	2019/12	2020/12	2020/12	
LG Display Co., Ltd.	¥ 37,059	¥ 31,754	\$ 305,327	Glass Business

(c) Information on impairment

2019/12:		
Millions of yen		
	Glass Business	Total
Loss on impairment	¥ 34,775	¥ 34,775

2020/12:		
Millions of yen		
	Glass Business	Total
Loss on impairment	¥ 2,419	¥ 2,419

2020/12:		
Thousands of U.S. dollars		
	Glass Business	Total
Loss on impairment	\$ 23,260	\$ 23,260

(d) Information on amortization of goodwill and unamortized balance

2019/12		
Millions of yen		
	Glass Business	Total
Amortization of goodwill	¥ 2,211	¥ 2,211
Balance at end of year	–	–

Note: The Company recognized loss on impairment of goodwill of ¥16,586 million for the fiscal year ended December 31, 2019.

There was no amortization of goodwill or unamortized balance for the year ended December 31, 2020.

19. Related party transactions

Transactions of the Company with related companies and others

(a) Transactions between the Company and affiliates of the Company

There were no significant transactions with related parties for the year ended December 31, 2019.

The following related party transactions took place in the year ended December 31, 2020:

Type of related party	Affiliate
Name	Fuzhou Xufu Optoelectronic Technology Co., Ltd.
Address	Fujian, China
Capital	CNY 240 million (\$36,782 thousand)
Type of business	Glass business
Voting rights (percent of shares owned)	Direct 40%
Business relationship	Sales and purchasing of glass products, interlocking directorate, obligation guarantees
Description of transactions	Sales of products and other items
Amount of transactions	¥3,708 million (\$35,654 thousand)
Account	Accounts receivable
Year-end balance	¥1,153 million (\$11,087 thousand)

Notes: 1. The amounts shown above exclude consumption tax.

2. Transaction conditions are determined through price negotiations, taking market prices and costs into account.

(b) Transactions between the consolidated subsidiaries and affiliates of the Company

There were no significant transactions with related parties for the year ended December 31, 2019.

The following related party transactions took place in the year ended December 31, 2020:

Type of related party	Affiliate
Name	Fuzhou Xufu Optoelectronic Technology Co., Ltd.
Address	Fujian, China
Capital	CNY 240 million (\$36,782 thousand)
Type of business	Glass business
Voting rights (percent of shares owned)	Direct 40%
Business relationship	Sales and purchasing of glass products
Description of transactions	Sales of products and other items
Amount of transactions	¥8,821 million (\$84,817 thousand)
Account	Accounts receivable
Year-end balance	¥6,318 million (\$60,750 thousand)

Notes: 1. The amounts shown above exclude consumption tax.

2. Transaction conditions are determined through price negotiations, taking market prices and costs into account.

20. Significant subsequent events

(a) Issuance of a significant amount of unsecured straight bonds

Based on the resolution of the Board of Directors on December 28, 2020, the Company issued the 12th unsecured straight bonds (with inter-bond pari passu clauses) as follows:

(1) Issue amount	¥10,000 million (\$96,154 thousand)
(2) Issue price	¥100 per face value of ¥100 of bond (\$1)
(3) Interest rate	0.260% per annum
(4) Issue date	February 26, 2021
(5) Maturity date	February 25, 2028
(6) Method of redemption	Bullet maturity
(7) Redemption price	¥100 per face value of ¥100 of bond (\$1)
(8) Use of funds	For repayment of long-term borrowings
(9) Special conditions	These bonds shall include a negative pledge clause.

(b) Significant capital investment

At the Board of Directors' meeting held on February 18, 2021, the Company resolved an additional capital investment as summarized below.

(1) Purpose of investments

The Company projects a global increase in sales for glass fiber products, mainly in Asia, due to increased demand for automobile parts. The Company plans to build a new manufacturing facility at Nippon Electric Glass Malaysia Sdn. Bhd., the Company's consolidated subsidiary, in order to respond to the global increase in sales.

(2) Details of investments

i. Location	Selangor, Malaysia
ii. Project title	New construction of a glass fiber manufacturing facility
iii. Total investment amount	¥37,000 million (\$355,769 thousand)
iv. Projected start date of operation	October 2022

(3) The significant impact of the investment on operating and production activities

The impact of this investment on the projected consolidated financial performance for the 2021 fiscal year will be minimal. However, the Company projects that the investment will contribute to further growth in operating results in the medium- and long-term.

Independent Auditor's Report



Independent auditor's report

To the Board of Directors of Nippon Electric Glass Co., Ltd.:

Opinion

We have audited the accompanying consolidated financial statements of Nippon Electric Glass Co., Ltd. ("the Company") and its consolidated subsidiaries (collectively referred to as "the Group"), which comprise the consolidated balance sheets as at December 31, 2020 and 2019, the consolidated statements of operations, comprehensive income, changes in net assets and cash flows for the years then ended, and notes, comprising a summary of significant accounting policies, other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at December 31, 2020 and 2019, and its consolidated financial performance and cash flows for the years then ended in accordance with accounting principles generally accepted in Japan.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in Japan. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Japan, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Corporate auditors and the board of corporate auditors for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern in accordance with accounting principles generally accepted in Japan and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Corporate auditors and the board of corporate auditors are responsible for overseeing the directors' performance of their duties including the design, implementation and maintenance of the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with auditing standards generally accepted in Japan will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of our audit in accordance with auditing standards generally accepted in Japan, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, while the objective of the audit is not to express an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate whether the presentation and disclosures in the consolidated financial statements are in accordance with accounting standards generally accepted in Japan, the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with corporate auditors and the board of corporate auditors regarding, among other matters, the planned scope and timing of the audit, significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide corporate auditors and the board of corporate auditors with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

Convenience Translation

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended December 31, 2020 are presented solely for convenience. Our audit also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 1 to the consolidated financial statements.

Interest required to be disclosed by the Certified Public Accountants Act of Japan

We do not have any interest in the Group which is required to be disclosed pursuant to the provisions of the Certified Public Accountants Act of Japan.

Motoharu Iyomasa

Designated Engagement Partner

Certified Public Accountant

Sung-Jung Hong

Designated Engagement Partner

Certified Public Accountant

Johta Mizo

Designated Engagement Partner

Certified Public Accountant

KPMG AZSA LLC

Kyoto Office, Japan

April 16, 2021

Notes to the Reader of Independent Auditor's Report:

This is a copy of the Independent Auditor's Report and the original copies are kept separately by the Company and KPMG AZSA LLC.

Corporate Information

Corporate Profile (as of December 31, 2020)

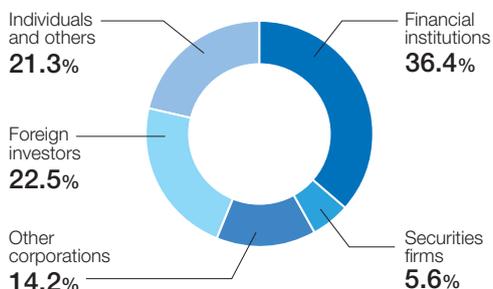
Founded	December 1, 1949	Plants (in Japan)	Otsu, Shiga-Takatsuki, Notogawa, Precision Glass Center
Company Name	Nippon Electric Glass Co., Ltd.	Capital	32,155 million yen
Head Office	7-1, Seiran 2-chome, Otsu, Shiga 520-8639, Japan Tel: +81-77-537-1700 Fax: +81-77-534-4967	Number of Employees	6,157 (consolidated)
Sales Headquarters (Osaka)	10F, Sumitomo Seimei Shin-Osaka Kita Bldg., 1-14, Miyahara 4-chome, Yodogawa-ku, Osaka 532-0003, Japan Tel: +81-6-6399-2711 Fax: +81-6-6399-2731	Stock Exchange Listings	Tokyo Stock Exchange (1st Section)
(Tokyo)	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	Stock Code	5214
		Fiscal Year	January 1 to December 31 of each year
		Ordinary General Meeting of Shareholders	Held each year in March
		Transfer Agent for Common Stock	Sumitomo Mitsui Trust Bank, Limited

Stock Information (as of December 31, 2020)

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	24,825

Distribution of Shares by Shareholder Type

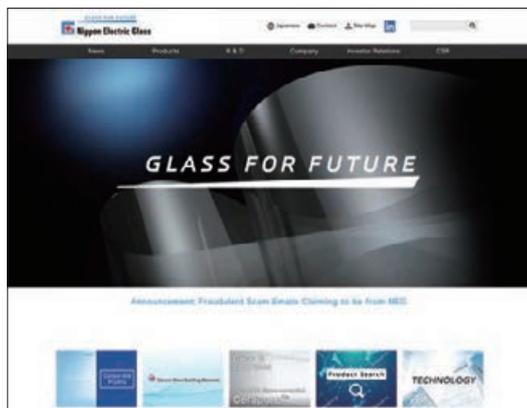


Major Shareholders

Shareholder	Number of shares held (thousands of shares)	Shareholding ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	10,957	11.3
NIPRO CORPORATION	9,657	10.0
Custody Bank of Japan, Ltd. (Trust Account)	5,722	5.9
JPMorgan Securities Japan Co., Ltd.	2,213	2.3
Custody Bank of Japan, Ltd. (Trust Account No.9)	1,929	2.0
THE BANK OF NEW YORK MELLON 140051	1,900	2.0
THE SHIGA BANK, LTD.	1,617	1.7
SMBC Nikko Securities Inc.	1,487	1.5
Custody Bank of Japan, Ltd. (Trust Account No.5)	1,176	1.2
JP MORGAN CHASE BANK 385781	1,163	1.2

Notes: 1. The Company holds 2,882,008 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/>

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- Corporate Governance
- Corporate Philosophy
- Locations



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

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



GLASS FOR FUTURE



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