

Nippon Sheet Glass Company, Limited



Integrated Report 2024

Fiscal Year Ended 31 March 2024

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Editing Policy

NSG Group started to publish "Integrated Report" since 2018. "Integrated Report 2024" aims to describe to our stakeholders how we respond to the various needs of customers and society with our value and services focusing on "glass and its related technologies" which are our strength and contribute to the sustainable development of society based on a management principle "Our Vision". Also, for editing the Integrated Report 2024, particular emphasis on the viewpoint of how we address and contribute to sustainability (ESG) and a new medium-term plan "2030 Vision : Shift the Phase" which started from FY2025/3

Information Disclosure Structure



Scope of Report

Period Covered: April 1 2023 to March 31 2024
 *Some content may include activities after April 1 2024
 Organizations Covered: Nippon Sheet Glass Company, Limited and its consolidated subsidiaries
 Financial Standards: Financial statements and financial data included in this data after 2011/03 were prepared in accordance with International Financial Reporting Standards.

NSG Group has reported this integrated report in accordance with the GRI standards. For more information, please refer to our [website](#).

Forward-looking Statements

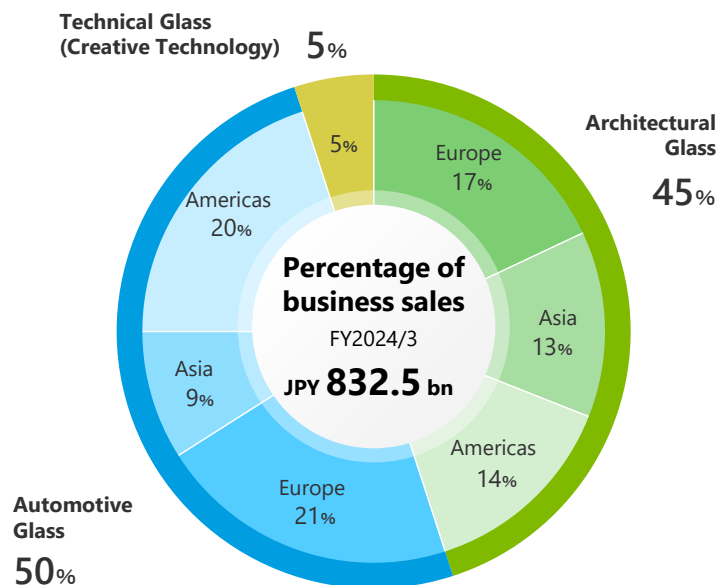
The projections contained in this document are based on information currently available to us and certain assumptions that we consider to be reasonable. Hence the actual results may differ. The major factors that may affect the results are the economic and competitive environment in major markets, product supply and demand shifts, currency exchange and interest rate fluctuations, changes in supply of raw materials and fuel and changes and laws and regulations, but not limited.

NSG Group Overview

Three Global Businesses : Architectural, Automotive, and Technical Glass (Creative Technology).

The NSG Group is one of the world's largest manufacturer of glass and have principal operations around the world and sales in over 100 countries.

The NSG Group is striving to realize a sustainable society by offering new values and services with glass swiftly and appropriately to meet the growing needs of our customers and society.



Architectural Glass

Leading supplier for architectural glazing and thin film solar panels

Products

1. Building glass & glazing
2. Glass for solar panels

Features

- 27 float lines operated globally
- Top market share in online coating

Sales percentage by region



Automotive Glass

Key supplier globally in new vehicle (OE) and automotive aftermarket (AGR)

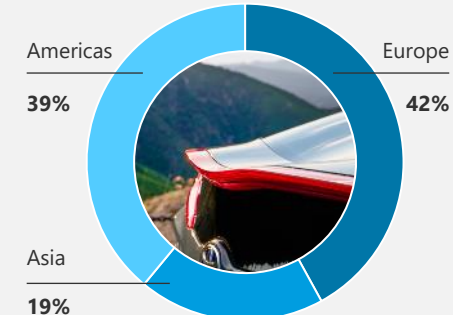
Products

1. Glazing for new vehicles
2. Glazing for replacement markets

Features

- Key operations in 13 countries
- Supplying glass to world's leading vehicle manufactures
- The largest global service provider for aftermarket

Sales percentage by region



Technical Glass (Creative Technology)

Unique 'Number One' and 'Only One' niche products

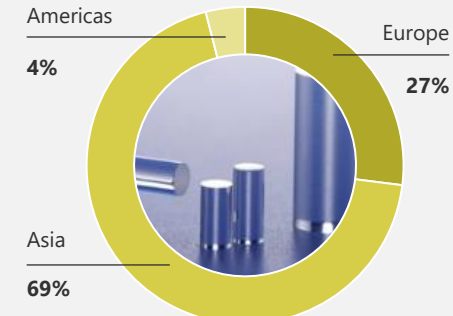
Products

1. Thin glass for display etc.
2. Lenses for printers, telecommunication devices and medical endoscopes
3. Glass cord for car engine timing belt, etc.
4. Glass flakes

Features

- Key operations in Asia and Europe
- Leader in printer lens

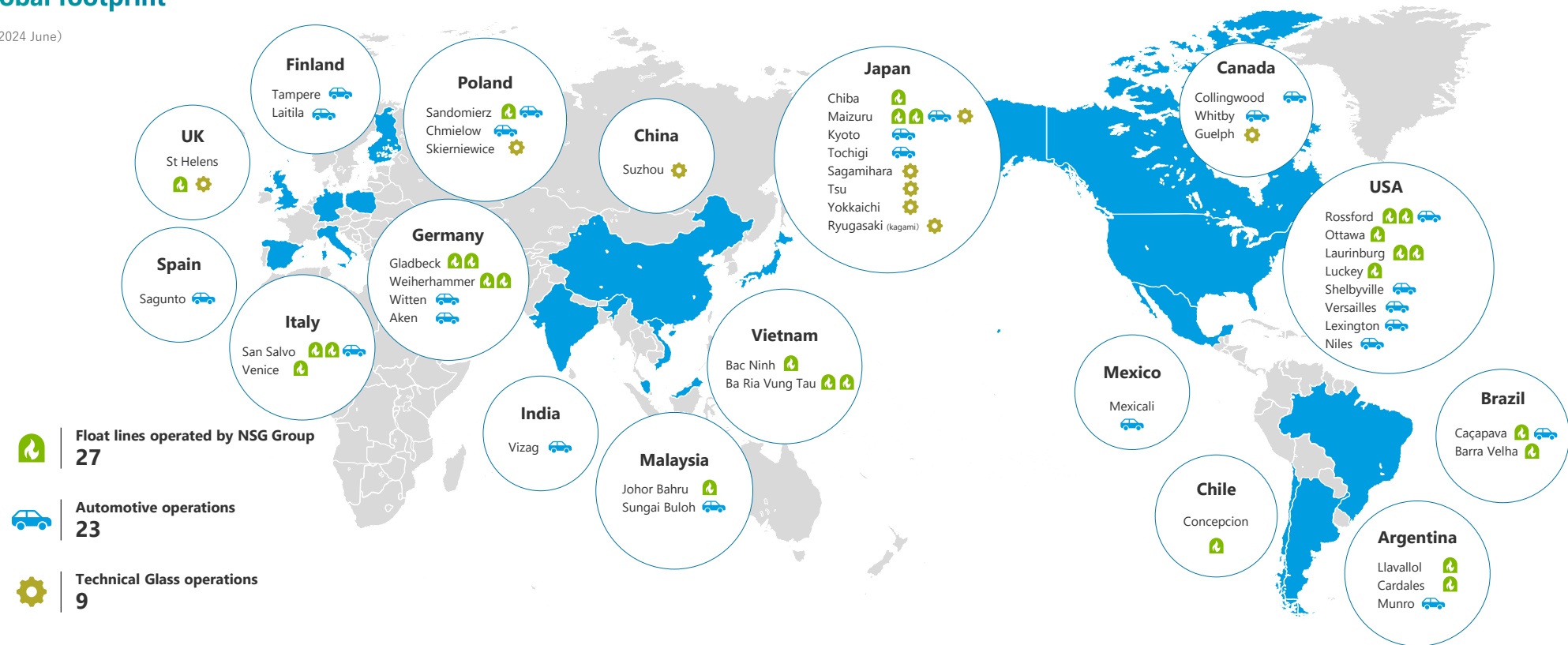
Sales percentage by region



NSG Group Overview

Global footprint

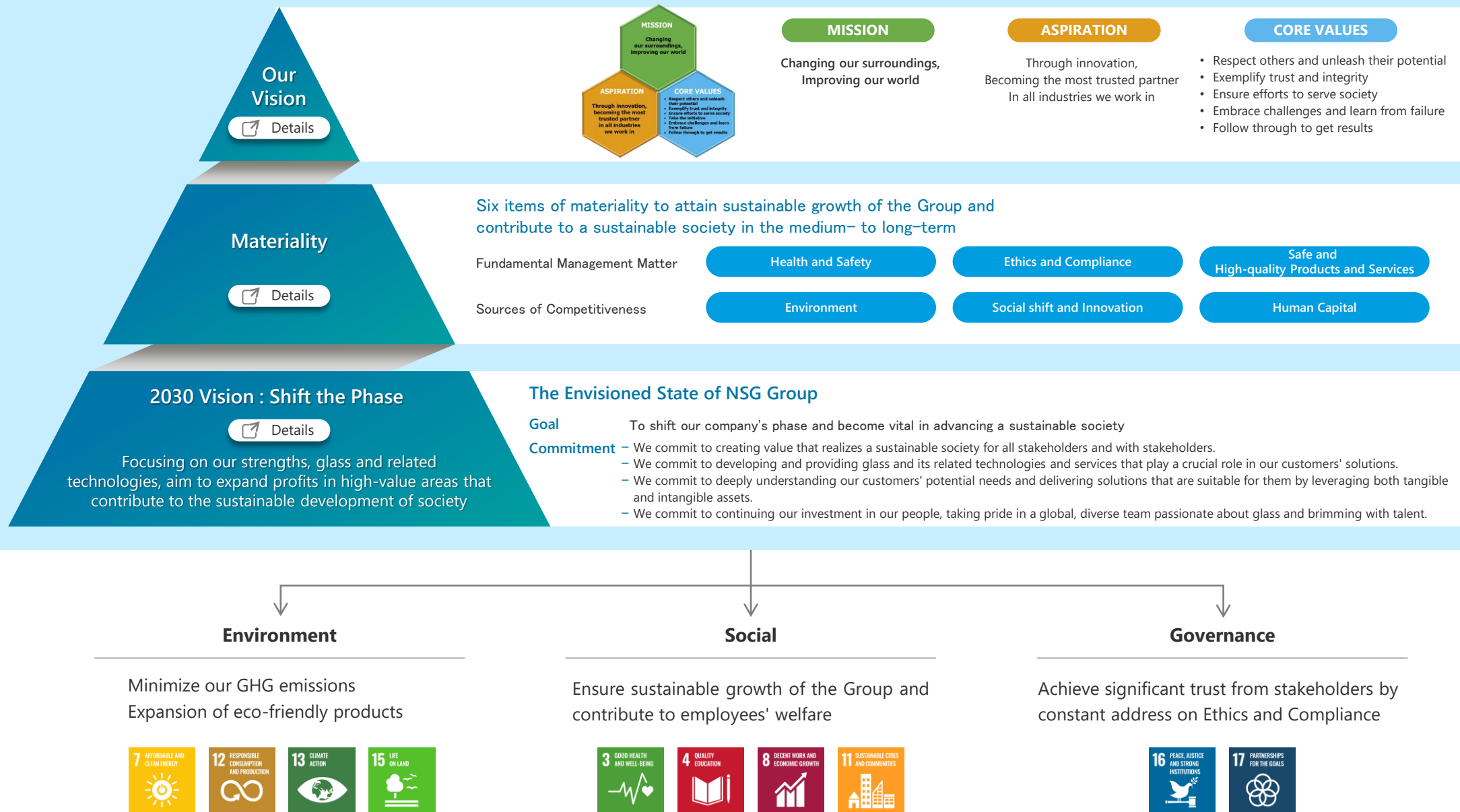
(2024 June)



NSG Group in numbers

Sales JPY832.5 bn <small>(FY2024/3)</small>	Operating Profit JPY35.9 bn <small>(FY2024/3)</small>	Net Asset JPY1,007.6 bn <small>(FY2024/3)</small>	Employees 25,300 <small>(March 2024)</small>	Float lines 27 <small>(March 2024)</small>	Foundation 1918	Sales in over 100 countries
Female managers ratio Actual results 14.4% → 16.0% <small>(December 2022) (March 2024)</small>	Research grants 1,485 PJ's <small>(Cum above JPY 1.8bn : 2024 May Cumulative)</small>	Online-coating glass share No.1 <small>(9 float lines)</small>	Lenses for multi function share No.1			

NSG Group's Structure of Strategy



CEO Message

The NSG Group is moving forward with its new medium-term plan, "2030 Vision : Shift the Phase", which is based on four key strategies, the "four D's", the "four F's", and a "One Team" spirit. These strategies aim to enhance our performance by mobilizing the collective power of our employees.

President and Chief Executive Officer

Munehiro Hosonuma

After one year in the role of Chief Executive Officer

The past year has demonstrated that we can overcome the historical rivalry between the former Nippon Sheet Glass and the former Pilkington and work together as "One Team". In discussions on the new medium-term plan, the management team was able to present a unified perspective on the direction of the NSG Group. A total of over 30 global and regional heads from all businesses gathered in Japan for a training camp to confirm the Group's goals and strategies. By meeting together, we were able to further reinforce the sense of unity and collaboration as "One Team". Executive officers with diverse nationalities also participated in an excursion to the Besshi Copper Mines in Shikoku, the origin of the Sumitomo Group. I believe that this helped us to gain a deeper understanding of the history and values that underpin the Sumitomo Group. During my first year in the role of CEO, I conducted 27 town hall meetings at domestic and international locations to communicate with our employees. These communications

reinforced my belief in the positive qualities of our Group, which is a place where people are honest, earnest, hardworking, respectful and accepting of others. There was a notable interest in new technologies and products. However, it was particularly noteworthy that there was a stronger than anticipated focus on sustainability, particularly decarbonization across the globe, and especially in Europe.

Despite returning to profitability in FY2024/3 from the previous year and exceeding JPY 10 billion in net profit for the first time in five years since FY2019/3 before the Covid-19 pandemic, our financial results fell short of our investors expectations, creating a challenging situation. While we were able to gain the confidence of our shareholders at the General Meeting of Shareholders, we must maintain our drive to improve our performance. This is reflected in the goals set out in our medium-term plan "2030 Vision : Shift the Phase", which was announced in May 2024. We will continue to strive for enhanced performance and the reassurance of our stakeholder base. In the previous year's Integrated Report, I stated that "I would like



CEO Message

to be a cheerful and positive CEO" and that "my beliefs are to gain trust, be given honest opinions, and respond to them continuously". I believe that I have basically succeeded in doing these things. I have emphasized the four "F"s (Flat organization, Frank communication, Fast decision making, and Fun at work), and have observed a notable shift in employee behavior. For example, I have observed a number of encouraging responses, including town hall meetings with employees, where I was able to prompt questions from employees who typically would not speak up in front of a large group. On the other hand, during a lunch with young employees at an overseas site I visited for the first time, I realized that none of them were aware of the four "F"s. I came to understand that with a workforce of approximately 25,000 employees, even simple concepts such as the four "F"s may not be understood. This reinforced my belief in the need to reiterate these ideas in straightforward terms to ensure they are understood throughout the entire NSG Group.



Visit to Sungai Buloh, Malaysia, March 2024

Dialogues with stakeholders

Board of Directors

In FY2024/3, we created a new Board of Directors Charter based on the independent third-party evaluation of the effectiveness of the Board of Directors and its committees (see page 90 for details). Furthermore, the Board of Directors has implemented a new approach whereby "material management issues" – as identified by the CEO – are defined and regularly updated for external directors in line with the milestones of each initiative. This has significantly enhanced the quality of dialogue by establishing a clear balance between supervision and execution, as well as defining the key areas for discussion.

The Board of Directors dedicated a significant amount of time discussing the medium-term plan. Additionally, several Directors Offline meetings were held, which are distinct from the formal Board meetings. The primary focus was on the Group's challenges, with a particular emphasis on improving the Group's financial performance and position, and enhancing the performance of the Automotive Glass business. The "Goals" and "Commitments" of the "2030 Vision" were also discussed. While these goals and commitments may appear somewhat abstract, I believe that "focusing on glass and related technologies" and human resources with a "passionate interest in glass" are the cornerstones of our future policy. I ensured that we were all fully aware of these points before proceeding with the discussions that followed. We then proceeded to discuss the financial targets we could realistically aim to achieve given the challenges we face, and the framework we would need to implement to achieve those targets. The latter discussion resulted in the identification of four strategic focus areas, being the "four D's" which will guide the new medium-term plan: Business Development, Decarbonization, Digital Transformation, and Diverse Talent.



Visit to San Salvo, Italy, December 2023

Customers

As part of our Business Development strategy, we recognize the importance of engaging in dialogue with our customers. I would like to have further discussions with customers about how we can collaborate to create new value for the development of a sustainable society. For this reason, I prioritize in person customer visits as well as overseas travel to facilitate direct communication. For example, last year I visited customers in the Automotive Glass business for Original Equipment and the Aftermarket in Europe. It became clear to me that they want us to grow with them in the future to a greater extent than we had anticipated. While there are other suppliers of glass products, I have been able to confirm a strong demand for our products, not only in terms of our technology, but also in light of geopolitical risks and other factors.

CEO Message

Employees

I communicate with employees via the all-employee survey, "Your Voice", town hall meetings at each site, and lunch meetings. The "four D's", the strategic policies of the new medium-term plan, have been in place since I assumed the role of CEO last year. However, during the plan's formulation, there were proposals to modify them. One of the reasons we decided to maintain the four "D"s as a core element of our strategy was that we found through employee engagement that they were highly interested in the "four D's", including "Decarbonization" and "Digital". It also became evident that they lack the awareness of the initiatives being undertaken by other regions, businesses, and factories. Throughout the Group, employees expressed a strong desire for "horizontal collaboration" and information sharing across organizational boundaries. Consequently, we are acutely aware of the importance of information sharing. For example, with regard to "Decarbonization", we are promoting opportunities for the R&D function to disseminate related information on a regular basis. In terms of "Digital", a range of measures, from large to small, are currently underway in each region, business and plant., These initiatives are company-wide, with all employees involved. Consequently, we promote visualization and dissemination of these initiatives, as well as the reinforcement of governance under the guidance of the new CDO (Chief Digital Officer). Furthermore, we will standardize our ERP system.

Shareholders

At the recent General Meeting of Shareholders, I was acutely aware of the expectations for the share price recovery and shareholder returns in the short term. The stock price saw a notable increase during the first half of FY2024/3, reflecting the Group's robust performance and affirming the expectation of a recovery driven by improved business performance. I am eager to see how the share price will respond when the Group implements the new medium-term plan and achieves its targets, including an operating profit of JPY 64 billion. We will continue to pursue improvements in our business performance and stock price.

Analysts and investors

We maintain ongoing dialogue with analysts and investors at second quarter and full year results briefings and in individual meetings. I recall being informed by an institutional investor that our stock price could be increased by a factor of three to four. It is encouraging to know that there are those who believe we can achieve this goal. It has motivated me to push forward with renewed determination. than ever before. I was also impressed by the shift in perspective regarding the Automotive Glass business as a result of our dialogue. In FY2021/3 and FY2022/3, when the impact of the Covid-19 pandemic was significant, many believed that rebuilding the business would be challenging. However, some suggested that aiming for a 5% operating profit margin (ROS) target for the Automotive Glass business in the current medium-term plan was just a steppingstone to even higher aspirations. I was reminded of the importance of demonstrating results, and that continued improvements and performance will lead to high expectations. On the other hand, I am somewhat surprised that I am still occasionally asked the question such as "Is the relationship between the former NSG and the former Pilkington still positive?" It has been almost 20 years since the acquisition of Pilkington, and we are now "One Team" as the NSG Group. If we fail to disseminate information effectively, we risk maintaining an outdated image of the past, particularly given the difficulty for external stakeholders to discern the changes within the Group.

In general, I believe that I have met the expectations of the stakeholders in my first year as CEO. However, there is a great deal of work to be done in the coming years. The new medium-term plan will commence in FY2025/3, which is my second year as CEO. We will work together as "One Team" to enhance our business performance in alignment with our strategic policy. I must also facilitate growth through dialogue with our stakeholders. I have been informing the senior managers and employees in the Group of the importance of continuing to learn and grow, and I will take the initiative in implementing the necessary actions.



Information about Revival Plan 24 (RP24)

The previous medium-term plan, "Revival Plan 24 (RP24)", concluded in FY2024/3. While we exceeded the RP24 financial targets for the equity ratio and free cash flow, we were unable to attain the operating profit margin and net profit targets. While we were unable to meet our net profit target in terms of absolute figures, we would have exceeded our three-year cumulative target of JPY 30 billion with JPY 31.8 billion had it not been for exceptional factors such as impairment losses. Despite the challenging business environment, we have made progress on three reforms and two key initiatives. Our operating profit has shown consistent growth over the three years reaching JPY 20.0 billion in FY2022/3, JPY 34.8 billion in FY2023/3, and JPY 35.9 billion in FY2024/3. This improvement demonstrated the enhanced earning power of our businesses. However, we are remaining vulnerable to economic fluctuations, as evidenced by the challenges currently facing our Architectural Glass business in Europe. We are committed to ongoing reforms to enhance our business resilience. Our business is susceptible to fluctuations in the economic landscape. Our objective is to mitigate the impact of economic downturns and maintain a stable performance even when markets are particularly challenging. In light of these considerations, we have identified the need to invest in R&D and production facilities, a commitment reflected in the cash allocation outlined in our new medium-term plan, "2030 Vision : Shift the Phase".

CEO Message

2030 Vision: Shift the Phase

First and foremost, the social agenda of sustainability will remain a critical focus. In this context, the demand for and value of glass as a material will remain consistent or even increase. For example, we anticipate an increase in demand for building renovations from an environmental protection standpoint, driven by a reduction in greenhouse gas emissions, the growth of new technologies such as perovskite and other solar panel technologies, and the advancement of Electric Vehicles and ADAS (Advanced Driver Assistant Systems) in automobiles.

In light of these considerations, our medium-term plan makes a clear statement of intent: we will continue to pursue advancing the value of the material in "glass". This is a very important starting point. By clearly stating that we will "focus on glass", we can leverage the strength of our approximately 25,000 employees to move forward in a unified direction. This policy has been well-received by our customers in our communications.

The goal of the proposed NSG Group structure is set as "to shift our company's phase and become vital in advancing a sustainable society", and four commitments are set forth to be achieved. The goal states, "shift our company's phase", which has two

interpretations. In response to the challenging business environment caused by the Covid-19 pandemic, a range of cost saving measures and investment cuts, including significant restructuring, were implemented. It was a period of survival. Following the structural reforms of the previous medium-term plan, this medium-term plan will facilitate the company's transition into a phase of sustainable growth as a corporation. Another interpretation is that, when necessary, we will not merely implement a series of minor improvements but will instead pursue major changes within the phase. These may include initiatives such as global standardization and integration, exemplified by the "Digital Transformation" among the "four D's". The Group also requires bold ideas and measures.

In terms of commitments, the first one places importance on engaging with our stakeholders, including customers, suppliers, governments, communities and employees, in a way that is beneficial for all parties involved. Our objective is to be a positive force, not only within our own Group, but also to become a vital partner to all stakeholders, contributing to the sustainable development of society. We recognize that no single company, including the NSG Group, can address all the challenges facing society today. It is no longer feasible to expect that any company can solve problems in isolation. Collaboration with stakeholders will be particularly important in our pursuit of



"Decarbonization", which represents one of the four "D"s of our strategic direction. The second and third commitments are related to "Business Development" within the "four D's". The second one is to leverage our strength of "glass and related technologies" to drive customer value and contribute to the advancement of a sustainable society. With regard to the third point, the NSG Group has a history of developing world-first technologies, including the float glass process for flat glass production. The phrase "leveraging both tangible and intangible assets" reflects our confidence and pride in our past achievements and our commitment to providing new solutions through our resources, including tangible technologies and facilities, as well as intangible human resources. To achieve this, we need to engage in constructive discussions with our current and prospective customers to identify new value that will benefit the global community and understand their potential needs. In the fourth one, we have made a commitment to maintain our investment in "human resources" recognizing that the realization of the three earlier commitments can only be achieved when we develop and retain a talented workforce. This is what we refer to as "Diverse Talent" in the "four D's". I added the phrase "passionate about glass" to the list. Given our focus on glass, it is imperative that our employees are passionate

Goal

To shift our company's phase and become vital in advancing a sustainable society

Commitment

- We commit to creating value that realizes a sustainable society for all stakeholders and with stakeholders.
- We commit to developing and providing glass and its related technologies and services that play a crucial role in our customers' solutions.
- We commit to deeply understanding our customers' potential needs and delivering solutions that are suitable for them by leveraging both tangible and intangible assets.
- We commit to continuing our investment in our people, taking pride in a global, diverse team passionate about glass and brimming with talent.

CEO Message

about this material. For this reason, I also believe that I need to demonstrate even greater enthusiasm for glass.

Next, we evaluated the financial outlook of the Group upon achieving its four commitments, and financial targets. In light of the uncertain business environment, we set an operating profit margin target of 10% or more for FY2030/3 which is six years from now. For FY2027/3, three years from now, we set targets of JPY 64 billion in operating profit, a 7% operating profit margin, JPY 27 billion in free cash flow, JPY 442 billion in interest-bearing debt, and a 15% shareholders' equity ratio. The most important financial targets the reduction of interest-bearing debt, from JPY 506.5 billion in FY2024/3 to JPY 442.0 billion in FY2027/3. I believe that the other financial targets are the means to achieving this goal. Currently, the financial burden is so significant that even with an improvement in operating profit, the majority of this is offset by financial expenses. To reduce financial expenses, it is essential to prioritize a reduction in interest-bearing debt, which represents the majority of expenses. To achieve this, it is essential to maximize free cash flow, which in turn requires an increase in operating profit.

As previously stated, the four strategic directions - the four "D"s (Business Development, Decarbonization, Digital Transformation, and Diverse Talent) - will guide us in achieving our financial targets. In the area of "Business Development", we will reinforce our new product and business development strategies. With regard to "Decarbonization", our goal is to make a meaningful contribution to the decarbonization of society. At the same time, we will establish value-added operations that leverage digital technologies to their fullest potential through "Digital Transformation", and foster a truly diverse and inclusive team capable of driving change through "Diverse Talent".

As CEO, I will oversee the implementation of a medium-term plan that fosters an organizational culture and mindset instrumental in idea generation and testing with the aim of driving the Group's sustainable growth. To achieve this, it is important to strike a balance between "discipline" and "freedom". It is necessary to create an environment in which it is easy to express one's opinions while ensuring psychological safety and maintaining financial discipline to ensure that funds

are used appropriately. We aim to further promote the four "F"s (Flat organization, Frank communication, Fast decision making, and Fun at the workplace) mentioned at the beginning of this message. In addition, new ideas require a comprehensive view of the medium- to long-term outlook. In this medium-term plan, we addressed the issues using a backcasting approach, starting from the envisioned state in 2030 to determine our current actions. I would like to implement this backcasting methodology throughout our organization.

Overview of the current situation and stock price of the NSG Group

I acknowledge that the recent decline in the share price is a result of our inability to meet the established performance expectations. As previously stated, our performance was robust during the first half of FY2024/3, resulting in a recovery of our stock price. In the second half of the year, the share price declined once more. This implies that expectations, and, consequently, the share price, will recover as we demonstrate an improvement in our performance. We are aware that we are behind other companies in terms of shareholder returns, such as dividend increases (in our case, resumption of dividends) and share buybacks. However, as mentioned in our new medium-term plan, we cannot take such measures all at once due to our high level of interest-bearing debt and low shareholders' equity ratio. To recover our stock price, our primary objective is to enhance our business performance. Fortunately, the new medium-term plan has been well received by analysts and institutional investors alike for its clear strategic direction. We intend to implement various measures based on this plan in a steady and measured way with the goal of showing results in the form of improved performance.

My enthusiasm for the next year and beyond

As evidenced by our performance in the second half of the previous fiscal year, the economic stagnation in Europe represents a challenge for us. It is imperative that we take action in the short term to address this issue. In June of this fiscal year, we ceased production at one float line in Germany. We will continue to take steps to improve efficiency, including further cost reduction.

On the other hand, the Group has numerous businesses that are performing well, with glass for solar panels representing a significant source of growth. We must continue to grow sustainably over the medium to long term. This is the goal of our new medium-term plan "2030 Vision : Shift the Phase", which is developed upon the business structure that we have established through RP24. In this regard, it is essential to implement both short-term measures, primarily focused on cost management, and medium- to long-term initiatives. We will navigate the first year of the new medium-term plan by adopting a balanced management approach. In challenging circumstances, there is a tendency to focus on our immediate future, which has previously led to difficulties for the NSG Group. We must avoid a repeat of such a situation.

To maintain a balance, we will continue to pursue the four "D"s as our strategic policy, the four "F"s for leveraging the capabilities of our employees, and the "One Team" spirit as the foundation of our management approach.

NSG Group's Business and Strength

Architectural Glass business

Leading supplier for architectural glazing and thin film solar panels

Market Conditions

While we see weak demand in short-term, the perspective for the medium to long term demand is set to witness a surge in renovation activities aimed at boosting energy efficiency. This trend is expected to catalyze growth in the building glass market. The demand for carbon neutrality is on the rise, particularly in developed countries. Anticipation grows for South America to join this expansion by around FY2030/3. This underscores the importance of developing capabilities to offer decarbonization solutions and securing a leadership role in the market.

Business Direction

We will aim to be a leading supplier of architectural glass that contributes to sustainability, with a focus on decarbonization. With leveraging our proprietary advanced coating technologies, we aim to become the development and supply partner for key components crucial for achieving the performance of customer products in renewable energy and similar sectors. Our key strategic measures are as follows.

■ Capability Enhancements for the Development of Sustainability Solutions

We will invest intensively in glass coating technology development and equipment. As a part of that, we accelerate business development with business partners and convert existing furnaces for architectural into solar applications in North America and Southeast Asia. At the same time, we also focus on a development that includes not only decarbonization but also wildlife protection.

■ Decarbonization of Our Products

To achieve carbon neutrality by 2050, the Group puts emphasis on establishing glass manufacturing technology using low or no carbon fuels with investing equipment. We will also actively launch low-carbon products such as Pilkington **Mirai™** which was launched in 2023. By applying advanced coating technology, we will develop new technologies contributing to expansion of renewable energy such as perovskite solar cell and dye-sensitized solar cell which has a long-term growth potential.

■ Continuous Reviews on Reginal Strategies

We will withdraw and invest strategically in Europe while recessing resource allocation in Southeast Asia to pivot towards the solar energy glass. At the same time, we will expand into regions where creation of added-value is expected in the medium to long term.

Architectural glass



Solar energy glass



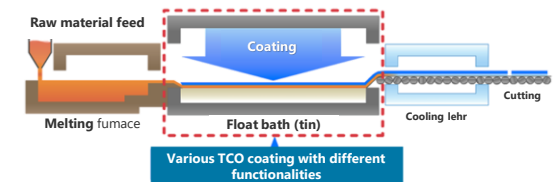
Value-added glass



Photo Credit:
SHIBUYA SCRAMBLE SQUARE

NSG Strength~ Online coating (CVD) technology

By coating glass, we can realize more effective thermal management than that of traditional glass while maintaining high visibility and transparency. Whether Low Emissivity coatings to reduce heat loss from buildings in cold climates or Solar control coatings which reduce need for air conditioning – these films play a key role in enhancing comfort inside, as well as the overall energy efficiency of the building.



One of our unique technologies for coating glass surfaces is on-line CVD (chemical vapor deposition). This is a technology that incorporates on-line coating into the float glass manufacturing process and uses a chemical reaction that utilizes the thermal energy of the glass to deposit a strong film on the glass surface and the Group have total 9 floats (4 in the US, 1 in UK, 1 in Germany, 2 in Vietnam and 1 in Malaysia) with on-line CVD coater around the world. It is energy-saving and mass-producible as it is produced during the glass manufacturing process, and the film is also highly durable and can be subjected to secondary processing. These technologies are used to produce a range of products such as glass with transparent conductive coatings (NSG **TEC™**), and highly reflective glass (MirroView). NSG **TEC™** are supplied to thin-film solar cell manufacturers, contributing to the expansion of renewable energy.

NSG Group's Business and Strength

Topics

Pilkington **Botanical™**

– Contributing to a sustainable future with glass for greenhouses



Pilkington **Botanical™** offers a wide range of solutions dedicated to maximizing the efficient growth of crops under glass and making greenhouse farming more sustainable.

To feed an expanding world population, global food production will need to increase by ~70% by 2050. Pilkington **Botanicals™** uses our highly transparent glass products as a base and applies a special coating aimed at providing optimal environmental conditions for crop growth and helping to maximize yields.

Pilkington **Botanical™** envisage a future where greenhouses that have come to the end of their useful life are taken down, collected and remelted into the next generation of higher performance

greenhouse glass. A great example that exemplifies this ethos is a UK initiative that allowed us to rescue 200 tonnes of glass from a 40-year-old greenhouse to avoid it going to landfill. The glass was returned and used as cullet at Watson Street Works, St Helens, UK. Through excellent cross functional collaboration across the business and working closely with our customer, this first-of-a-kind project demonstrates the approach and benefits of identifying new sources of glass cullet.



Architectural Glass business, Segmental champion of Horticulture Glass

Aleksandra Pasek

Initiatives such as this demonstrate our commitment to a sustainable future through our products, the way in which we manufacture them and how we can support circularity via recycling. Greenhouses in the UK alone cover an area of 30 million m2. The move to more efficient farming methods will require new and more efficient glass. Developing relationships with greenhouse companies allows us to identify opportunities such as this and to learn about some of the challenges we need to overcome. This one project saved over 50 tons of CO₂ as well as being nominated for a Sustainability Award as the Fresh Awards!

Fresh Award: Organized by the Fresh Produce Consortium, the awards recognize and celebrate all aspects of the produced food industry in the UK and play an important role in supporting the growth of all aspects of the UK and global supply chain.

Z2 project

– Helping to make buildings "green"



The "Z2 Project" by Züblin, one of Germany's largest construction companies, headquartered in Stuttgart are renovating their existing building using our products. Züblin place great importance on Sustainability and the Environment which aligns very well with the NSG Groups contribution to sustainable construction through our products. Glass used on the building's façade is triple glazing, which combines Pilkington **Mirai™**, a next generation low-carbon glass product with our high performance solar control glass, Pilkington **Suncool™** Q60, and Pilkington **Suncool™** 70/40. Pilkington **Mirai™** ("Mirai" means "future" in Japanese) is a future facing building product offering with a 52% less embodied carbon footprint

compared to our standard float glass, produced via a combination of alternative fuels and a high recycled glass content and renewable electricity. Pilkington **Suncool™** helps to control the solar heat gain without significantly reducing internal light levels, thus reducing the need for cooling and heating systems in buildings; supporting 'greener' constructions. In addition to positively contributing to the environment through our products, this project also promotes the transition to a circular glass economy by collecting and recycling old architectural glass reducing the amount of float glass being sent to landfill under our "renew:glass" initiative.



Architectural Glass business, Senior Technologist

Dr. Christian Eibl

Sustainable from start to finish, Pilkington **Mirai™** was the perfect product for this project. The manufacturing process uses 100% green electricity and alternative fuel, high recycled glass content and green electricity sources yet offers identical performance, quality and aesthetics with only half the impact on the environment, i.e. the CO₂ global warming potential is reduced by more than 50%.

Combining our high-performance solar control Pilkington **Suncool™** coating with a high-performance thermal insulation coating the triple-insulating units provide a sustainable solution over the entire lifetime of the glass. For this project, we also recycled old glass from the building back to the float process ensuring circularity is a consideration with every project we undertake.

NSG Group's Business and Strength

Automotive Glass business

Automotive glazing for new vehicles (OE) and for replacement markets (AGR)

Market Conditions

The new vehicle market is showing signs of recovery, yet vehicle production in our key markets is not anticipated to reach levels seen before the Covid 19 pandemic. On the other hand, the added value per vehicle is increasing with the penetration of ADAS^{*1}/EVs into the markets with the spread of CASE^{*2}. As glass bending and laminate technology requirements grow more complex to comply with ADAS/EV standards, elevating development and technological standards and boosting manufacturing capabilities become crucial for enhancing profitability and competitiveness. In the aftermarket, the growing number of new, ADAS equipped vehicles increases the demand for sophisticated ADAS compatible windshields, which in turn poses challenges to us in terms of timely supply. It is becoming crucial not only to develop and manufacture these advanced products but also to ensure quality service through an ecosystem incorporating skilled fitters for repair and replacement.

*1 CASE : Connected, Autonomous, Shared, Electric *2 ADAS : Advanced Driver Assistance System

New vehicles (OE)



Replacement markets (AGR)



Business Direction

We will accelerate manufacturing technologies to enable our global customers to shift to safer, connected, greener vehicles while shifting to a sustainably profitable business as a key strategic global supplier. Key strategic measures are as follows.

Capability Enhancements to Cater to ADAS and EV

We will develop advanced glass bending technology and manufacturing technologies for the diversifying applications of laminated glass, among others.

Strengthening the Aftermarket Business

The Group will improve inventory management to supply market timely and enhance efficiency by integrated management of new vehicles and aftermarket businesses.

Thorough Improvement of Profitability

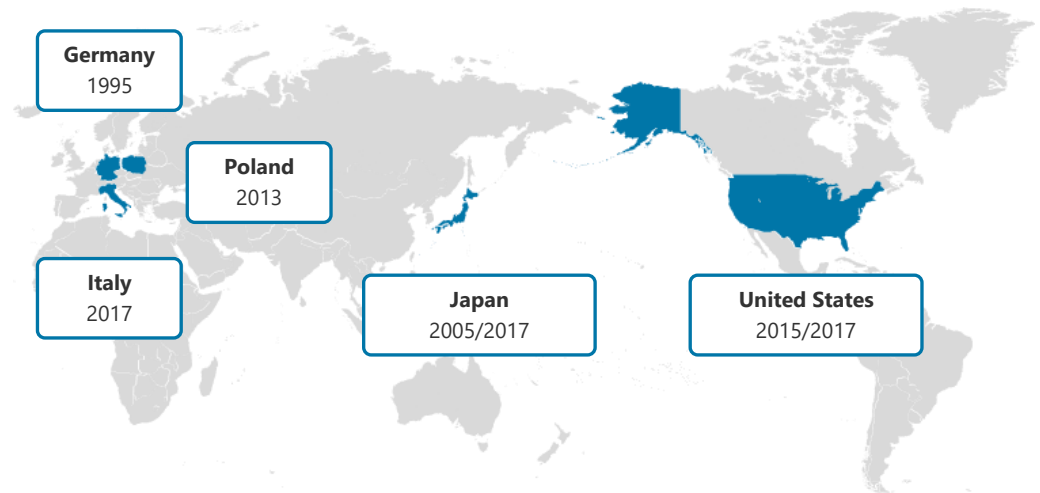
We plan to review the pricing strategy continuously, optimize the footprint further, and improve operations.

NSG Strength

Since 1995, the Group began installing APBL^{*3} equipment and were among the first to establish a global production system. Laminated glazing is used for windshields to prevent from shattering for the safety of the drivers and passengers. There is a growing need for high-precision windshields for ADAS and HUD^{*4}, and APBL manufactures them for ADAS function and accurate HUD image projection.

*3 APBL: Advanced Press Bending for Laminated Glass *4 HUD: Head Up Display

Installation of APBL



Windshields with ADAS and HUD

High-precision windshields processing technology is required to ensure that ADAS functions accurately, preventing accidents and projecting speed and navigation.



NSG Group's Business and Strength

Topics



Super UV + IR cut glass – Used for front side glass

NSG Group's Super UV+IR cut glass has been used for front side glass in many kinds of vehicle, mainly in Japan, for more than 10 years. Our products are one of the most durable in the markets and can be used for a long time without maintenance and the need for glass replacement.

The strong point of this product is that it cuts ultraviolet rays (UV) by more than 99% and reduces infrared (IR) incidence while satisfying the Japanese regulation of visible light transmittance (more than 70%). By applying NSG's unique coating technology to the inner side of the door glass, this shows performance that greatly improves the comfort of the interior space while maintaining the same

appearance as ordinary glass.

With this product, it is possible to suppress sunburn on the face and arms and the temperature rise of the passengers and the room in summer. It is an eco-friendly product that increases the energy efficiency of the vehicle with a contribution to the reduction of air conditioner use even in the severe environment of summer. This function is highly expected as the shift to EVs is promoted in the future. In addition, this product contributes to the overall sustainability of the vehicle since it prevents interior parts such as instrument panels and seats from deterioration due to ultraviolet rays.



Automotive Glass business, Japan Sales Department, Technical Marketing General Manager

Daisuke Tsuji

In addition to high UV and IR cut performance, this product also has high durability and is highly appreciated by many vehicle manufactures. Currently, we have the top share in the domestic market. It is popular among customers especially who are concerned with sunburn in summer, mainly in Japan.

And this is an environment-friendly product which contributes to reducing the load on the air conditioner by controlling the temperature rise interior space. Many Japanese vehicle manufactures recognize its valuable performance, and this product has been widely adopted from K-cars to luxury cars.

I hope everyone who hasn't used it yet can experience it soon!



Variable transmission glass – New laminated roof lights for EVs

NSG Group is currently developing a new generation of laminated roof lights that perfectly match the requirements of battery electric vehicles (EVs). The interlayer contains liquid crystal particles dispersed in a polymeric gel (so-called PDLC). It enables to switch between transparent and opaque whether the particles are currently submitted to an electric voltage or not. The quick change of the state mimics a sunblind that will scatter the light and reduce the sun glare when needed. And it's all within the glazing! Such a product enables additional comfort and a futuristic experience for a person who is in a car.

To make it happen and effective in all

conditions, NSG Group introduced a new laminated construction with upgraded solar performance. It reduces even more the heat exchanges between the exterior and the cabin compared to a standard Low-E* (low emissivity) roof light. As a consequence, for an electric car, the battery range is extended through the improvement of energy saving and reducing cooling and heating loads by suppression of heat exchange.

*The Low-E coating on the glass inhibits the release of heat absorbed by the glass into the vehicle in summer and reflects heat generated inside a car in winter, thereby reducing the heat in summer and improving heating efficiency in winter, and increasing comfort inside the car.



Automotive Glass business, Global product manager (roof light)

Xavier Arnaud

NSG Group exhibited at the JAPAN MOBILITY SHOW 2023 (formerly Tokyo Motor Show), which was held from October 26 to November 5, 2023. As our survey demonstrated, the public expressed a strong interest in our PDLC roof light prototype special mock-up that simulates the mobility of the future.

It reinforced our desire to bring this product to the market. Our Research and Development teams in both Japan and Europe strongly collaborated to test and validate it.

We are proud to offer products in the near future with improved sunlight control performance and the ability to switch between transparent and opaque at the flick of a switch.

NSG Group's Business and Strength

Technical Glass business (Creative Technology)

Unique 'Number One' and 'Only One' niche products

Market Conditions

While a sharp decline in these markets is not immediately expected, the markets targeted by existing products are facing competition from alternative materials and significant growth is not anticipated. In contrast, adjacent market areas are experiencing growth, with opportunities emerging from expanded applications. For instance, automatic optical inspection systems are projected to grow by approximately 10%, and markets for factory automation and e-bikes are also expanding.

Business Direction

The Group will establish a new revenue pillar by developing proprietary materials that play a pivotal role in advancing our customers' product offerings. Followings are key strategic measures.

Expansion of Business in Adjacent Markets

We will develop new applications and uses for glass flake and fiber technology while advancing SELFOC® optical materials technology to develop its new applications.

Commercialization of New Technologies

We will expand sites and staff in customer markets and regions to commercialize product pipelines steadily in the process of co-creation with customers.

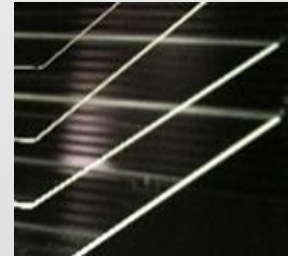
Selection of Technological or Business Seeds

We continuously identify needs and seeds, assessing commercial viability of seeds, and sifting out those that have no chance.

NSG Strength

Glass properties including "transmit light", "light and strong", and "non-conductive" are leading to innovative designs by engineers. Some products maintain a high market share such as lenses for printers and glass cords. NSG will continue to build its future with its clients as the pioneer of high-performance glass materials.

Thin glass



Optoelectronics products



Specialty glass fiber products



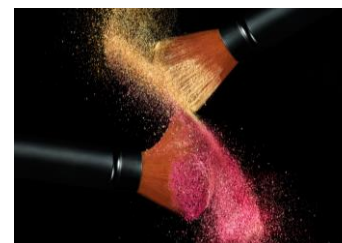
Glass cord

Glass cord is a glass fiber product with NSG's proprietary technology to reinforce rubber and resin products. As well as improving the elasticity, durability, and dimensional stability of belts, these strong, and bendable stretch resistant cords also help to achieve drive systems that are kinder to the environment and save energy.



High modulus, high strength glass fiber MAGNAVI™

High modulus, high strength glass fiber MAGNAVI™ is the ideal solution for reinforcement of composites to reduce weight and increase strength. MAGNAVI™ was created with the environment in mind during its product development, including the selection of environmentally friendly raw materials and low CO₂ emissions during production.



MICROGLAS® METASHINE®

METASHINE® is inorganic glittering pigment coated by metal or metal oxide on flake shaped glass substrate to generate beautiful luster. It is made from raw materials that are friendly to both humans and environment. High quality glitter can be obtained from sparkle of reflection and interference delivered only by flake shaped glass.

NSG Group's Business and Strength

Topics

MAR'VINA® GLACIA DROPS® — Base makeup powder product with safety for the skin and environment



Plastics are widely used for products, packaging, and buffer materials since they are easy-care and durable. Some cosmetics use plastic materials called “micro-plastic beads” (0.001 mm-0.1 mm) which are small spheric organic beads to enhance the texture. Regulations on microplastic use in cosmetics are reinforced in many countries as the risk of impacting ecosystems and food chains when they are leaked into rivers and seas is concerned.

The NSG Group developed spherical glass beads “GLACIA DROPS™” which can be used as the substitute material for micro-plastic beads. The

product is characterized by its inorganic yet moist touch. Also, we use carefully selected raw materials so that the product contains almost no impurities and has a high degree of transparency. Therefore, they blend in with any skin color and create a natural finish. It is finding increasing opportunities for use in base makeup as a cosmetic powder that offers safety for the skin and the environment.



Creative Technology business, Functional Products division (Asia)

Haruko Horiguchi

Upcycled* materials have been getting attention in the cosmetics industry for the past few years. We have taken on the challenge of creating a highly value-added material using glass powder that was disposed during manufacturing processes. Using glass powder as a raw material also has the benefit of reducing energy consumption in the manufacturing process. We confronted many difficulties in the development process, but we could achieve the desired powder performance after many attempts to meet customer requirements. I hope that GLACIA DROPS™ will be a product that enriches people's minds. We will continue to seize opportunities arising from environmental issues and regulations surrounding cosmetic raw materials and expand our lineup of cosmetic powders that meet our customers' demands.

*Upcycle: Adding a value to something that is no longer use or wastes and giving a new life

Immersion cooling technology for data center
— achieving both energy savings and high-speed communication



It is said that the amount of data circulating on the Internet will increase by more than 30 times in the next 10 years, and as a result, the energy load required to cool servers and other equipment in data centers is expected to continue to increase. 30-40% of the power consumed in data centers is used to cool equipment, and it is believed that energy savings can be achieved by cooling servers more efficiently. Immersion cooling technology* which cools server equipment by directly immersing it in a refrigerant liquid has been tested in Japan as a key technology for reducing power consumption in data centers due to its superior energy-saving

performance, and the development of related peripheral technologies is also being rapidly progressed. NSG Group is jointly developing a multifiber optical connector that supports immersion cooling, taking advantage of the features of the ultra-thin lens (125μm, the same diameter as optical fiber) SELFOC® Micro Lens, that can be used even in refrigerant liquid. While conventional optical connectors used in immersion-cooled equipment have been plagued by communication failures due to contamination by refrigerant liquid, this newly developed product can ensure the quality of communication.



Creative Technology business, Information & Telecommunication Device Division

Takuji Kawai

An ultra-thin SELFOC® Lens was developed to realize a compact optical system when using with optical fiber. While exploring the possible uses of lenses for various optical communication-related applications, we arrived at the application that best utilizes characteristics of the ultra-thin SELFOC® lens, which is a multifiber optical connector that supports liquid immersion cooling.

This product is not limited to optical connectors, but is expected for use in fields of optical fiber, such as various optical communication-related devices and optical fiber sensors, and for image transmission applications, in extremely small observation devices such as endoscopes. We are currently receiving inquiries from many customers, and I hope that our products will be used in a variety of fields.

Although the basic development of the product itself has been completed, the lens has a very small wire diameter of 125 μm, so improving ease of handling remains a challenge. We will continue to advance technological development to make the product easier to use for more customers.

*Immersion cooling technology: effectively cools equipment by immersing the entire device in a special liquid that does not conduct electricity and bringing the refrigerant liquid into direct contact with the device

Financial Highlight

Consolidated Income Statement

million yen

	FY2020/3	FY2021/3	FY2022/3	FY2023/3	FY2024/3
Revenue	556,178	499,224	600,568	763,521	832,537
Operating Profit before Exceptional Items	21,177	13,067	19,980	34,812	35,860
Profit before Taxation	-13,549	-17,171	11,859	-21,933	17,597
Profit Attributable to Owners of the Parent	-18,925	-16,930	4,134	-33,761	10,633
Operating Profit Ratio to Revenue	3.8%	2.6%	3.3%	4.6%	4.3%
Profit Attributable to Owners of the Parent Ratio to Revenue	-3.4%	-3.4%	0.7%	-4.4%	1.3%
ROE	-25.7%	-26.9%	2.8%	-34.8%	8.6%
ROA	3.0%	1.8%	2.4%	4.2%	4.6%

By Business Segment

million yen

Revenue	Architectural	233,687	215,501	281,816	365,947	371,777
	Automotive	280,977	245,184	276,246	354,693	417,558
	Technical Glass	40,143	36,818	39,770	38,754	39,945
	Others	1,371	1,721	2,736	4,127	3,257
Operating Profit	Architectural	17,331	15,670	28,130	33,557	29,087
	Automotive	6,100	1,802	-7,908	4,052	11,343
	Technical Glass	7,116	6,707	9,907	8,733	7,146
	Others	-9,370	-11,112	-10,149	-11,530	-11,716
Profit Ratio to Revenue	Architectural	7.4%	7.3%	10.0%	9.2%	7.8%
	Automotive	2.2%	0.7%	-2.9%	1.1%	2.7%
	Technical Glass	17.7%	18.2%	24.9%	22.5%	17.9%

Balance Sheet

million yen

Total Assets	765,197	824,963	939,281	951,387	1,007,585
Interest-bearing Debt	435,007	471,710	467,885	495,120	506,460
Net Debt	390,169	411,771	365,173	407,923	447,497
Shareholders' Equity	73,612	62,937	145,291	97,040	124,275
Shareholders' Equity Ratio	9.6%	7.6%	15.5%	10.2%	12.3%

Cash Flows

million yen

Cash Flows from Operating Activities	30,444	21,053	45,061	48,506	58,769
Cash Flows from Investing Activities	-56,888	-25,589	-22,787	-34,649	-43,512
Free Cash Flow	-26,444	-4,536	22,274	13,857	15,257
EBITDA	55,023	46,837	56,651	75,006	81,783
Net Debt/EBITDA	7.1	8.8	6.5	5.4	5.5
Capital Expenditure	-66,971	-43,347	-28,629	-40,917	-58,175
Depreciation & Amortization	34,842	35,768	36,675	40,212	45,922

Per Share

yen

Earnings per Share	-236.0	-208.3	24.1	-393.1	95.4
Book Value per Share	470.9	349.6	1256.0	723.8	1021.3
Cash Flow per Share	-291.7	-49.9	244.8	152.0	167.6

Medium-Term Plan

2030 Vision : Shift the Phase

Focusing on our strengths, glass and related technologies, we aim to expand profits in high-value areas that contribute to the sustainable development of society.

GOAL

To shift our company's phase and become vital in advancing a sustainable society

Commitment

- We commit to creating value that realizes a sustainable society for all stakeholders and with stakeholders.
- We commit to developing and providing glass and its related technologies and services that play a crucial role in our customers' solutions.
- We commit to deeply understanding our customers' potential needs and delivering solutions that are suitable for them by leveraging both tangible and intangible assets.
- We commit to continuing our investment in our people, taking pride in a global, diverse team passionate about glass and brimming with talent.

Group-Wide Strategic Direction - 4 "D"s

Business Development

To strengthen new product and business development efforts

Decarbonization

As part of our contribution to societal decarbonization

Digital Transformation

Through high-value operations utilizing digital technologies to their full extent

Diverse Talent

In order to realize a truly diverse and inclusive team that brings about the phase shift we need

FY2024/3

Operating Profit

35.9 billion yen

ROS

4.3%

Free cash flow

15.3 billion yen

Interest-Bearing Debt

506.5 billion yen

Shareholders' equity ratio

12.3%

FY2027/3

64.0 billion yen

7%

27.0 billion yen

442.0 billion yen

15%

FY2030/3

ROS

10% or more

CFO Message

We will enhance our corporate value by reducing excess interest-bearing debt, which is our biggest problem. We will achieve this by meeting the financial targets set out in the new medium-term plan "2030 Vision : Shift the Phase".



Senior Executive Officer
Chief Financial Officer

Akihito Okochi

One year as CFO

It has been one year since I joined the Group in May 2023 and was appointed CFO in June.

In the previous integrated report, I highlighted two key strengths of the Group: its excellent human resources and advanced technologies. My assessment remains unchanged. In the previous year, we experienced a sharp rise in raw material prices, as well as the devaluation of the Argentine peso following the presidential change in Argentina and rising market interest rates in Europe and the USA. These are inevitable consequences of doing business globally. However, despite ongoing changes in the business environment in some regions, we were able to take the initiative and implement various measures in a timely manner without waiting for instructions from anyone.

In particular, in the second half of the FY2024/3, when the European economy slowed down significantly, I was impressed by the fact that each division was carefully considering its next move and how to ensure and improve profitability in response to changes in the business environment. The decision was made to close one of our float lines in Germany in FY2025/3 ahead of scheduled cold repair in the following year. This is one example of the high caliber of the Group's human resources.

In regard to advanced technologies, we have been engaged in conducting joint development of perovskite with a significant number of partners, with a focus on future market opportunities. I have observed a number of instances in which the technologies we have been researching and developing have progressed toward commercialization. It is inevitable that some

technologies will be discontinued during the R&D stage. However, I am pleased to see the consistent progress being made.

On the other hand, while our growth strategy based on the current business environment is highly reliable, I believe that we can enhance our earnings potential by pursuing innovations that are different to existing offerings. Looking at each business unit, the Automotive Glass business has a culture of developing a wide range of measures including both high-probability and low-probability options. For example, this business proactively promoted the consolidation and closure of sites, optimized the number of glass sheets loaded on pallets for transportation to enhance production efficiency, and formulated a variety of M&A ideas. In the area of business development, in the Technical Glass business, the products that I was informed of in the first quarter of the previous year, right after I assumed the role of CFO, have made steady progress in the first quarter of this year. In the previous year, our focus was on understanding the market. This year, we have progressed to the stage of manufacturing products, showcasing them to customers, and beginning to envision the potential business scale. This is the result of employees thinking in an innovative and creative manner. As a company, with a history of more than 100 years, we have a reputation for conservatism, which is typical for long-established businesses. I anticipate that we will continue to see a rise in ambitious thinking, with a willingness to embrace challenges without a fear of failure.

CFO Message

As stated in the previous integrated report, the CFO's role is to serve as a business partner and supporter, and I consistently approach my duties with this in mind. I have been able to make a valuable contribution to the expansion of business value in accordance with the actual situation of the business, without unreasonable restraints on cost and capital investment, through effective communication with the relevant parties. On the other hand, I recognize that I need to be more mindful of my own communication. Over the past year, I have visited many of our major sites around the world, creating opportunities to engage in direct communication. However, I will enhance the quantity of communication and ensure that the scope of communication extends to at least one level below my direct report. In terms of communication quality, I would like to motivate employees by sharing knowledge of best practices across each business and communicate the positive aspects of the Group that we are confident of.

I have been maintaining effective communication with external stakeholders. Despite revenue and operating profit growth for three consecutive years until FY2024/3, the operating profit margin (ROS) declined by 0.3 points from the previous year. The current business environment and other conditions are being regarded as harsh. It is regrettable that our stock price has failed to improve due to our inability to meet market expectations, despite the Group's collective efforts. As CFO, I believe it is important for me to communicate more openly about our current situation and our plans for growth and improvement as a company, in order to gain the confidence of our shareholders, investors, and financial institutions.

Review of FY2024/3

In terms of business performance, we have been able to demonstrate results by steadily increasing our earnings power and cash generating ability in line with business growth. This is evidenced by three consecutive years of increased revenue, operating profit, and operating cash flow. We acknowledge that the enhance cash generation capability is attributable to the heightened awareness of cash and financial discipline, which has become an important aspect of our corporate culture, and the progress that has been made in this regard.

However, I am not satisfied with this level of performance as ROS has declined by 0.3 points from FY2023/3. Furthermore, free cash flow has achieved the RP24 target of JPY 10 billion or more per year, and the shareholders' equity ratio was above the target of 10%. Interest-bearing debt must also be reduced.

In terms of the business environment, the Group has been affected by an increase in the costs of raw materials and labor, which has arisen from the worldwide inflation trend. However, there has been a positive impact from lower fuel prices more recently. By business segment, the Architectural Glass business benefitted from robust demand across all regions during the first half of the year, but the economic slowdown in Europe during the second half had a notable impact on the business. The Automotive Glass business improved due to the ongoing easing of vehicle production constraints caused by component shortages, particularly semiconductors. Additionally, there was further progress in price negotiations with a number of customers to offset the impact of higher input costs. The Technical Glass business was impacted by the slowdown of the IT market, though demand varied across different business sectors.

Looking at the financial environment, the Group benefited from the depreciation of the Japanese Yen against major foreign currencies. The third quarter saw an adverse impact from the devaluation of the Argentine Peso, while the second half of the

year was marked by the impact of continuing high interest rates in Europe and the USA. Given the significant impact of interest rates and exchange rates on our business, it is crucial for us to enhance our business and financial structure. It became clear that we needed to build a business structure that could withstand any deterioration in our businesses or regions and strengthen our financial structure, ensuring it was not affected by the external macroeconomic factors.

To achieve this, we must lower the break-even point of our businesses. It is essential to monitor customer and product profitability more closely than ever before, and then take appropriate action to improve unprofitable businesses, or in some cases, terminate them. In addition to confirming the profitability at the outset to determine whether to make a capital investment, it must be monitored with greater precision than ever before to ensure that the sales price is sufficient based on costs after the capital investment is made and the product is



CFO Message

Review of RP24

The final year of the previous medium-term plan, Revival Plan 24 (RP24), was FY2024/3. From the CFO's perspective, we met our financial targets for the shareholders' equity ratio and free cash flow (10% and JPY 10 billion per year each) for three consecutive years. These are excellent results, and all employees should be commended for their contributions. I would like to extend my gratitude once again to all of our employees. However, given the level of our interest-bearing debt, these figures are still insufficient, and we must raise them further.

In contrast, ROS fell below the target for three consecutive years, and net profit also fell short of the target. However, although the net profit did not reach our target of JPY 30 billion for the three-year cumulative total this was largely due to non-recurring exceptional events. If we had excluded these factors, such as the impairment of goodwill and intangible assets regarding the European Automotive business of JPY 48.8 billion in FY2023/3, the Group's cumulative net profit over the plan period would have been JPY 31.8 billion, which would have achieved the target. I believe these results demonstrate the hard work of our employees. However, results are the measure of success, so we must acknowledge that we have not yet achieved our target. In light of these results, we have developed our new medium-term plan, “2030 Vision : Shift the Phase”, which commences in FY2025/3. The plan aims to enhance our financial performance further. FY2025/3 is important as it marks the first year of the medium-term plan.

The primary reason for failing to achieve the ROS target was the relatively lower ROS in the Automotive Glass business. A review of the ROS for FY2024/3 by business reveals that the Automotive Glass business remains at a low level of 2.7%, while the Architectural Glass business is at 7.8%, and the Technical Glass business is at 17.8%. It is essential to improve the ROS in the Automotive Glass business, especially in Europe and the

	FY2022/3	FY2023/3	FY2024/3	RP24 Targets
Operating Profit Margin*1	3.3%	4.6%	4.3%	8%
Net Profit*2	4.1 billion yen	(33.8 billion yen)	10.6 billion yen	3-year cumulative total of 30 billion yen or more
Shareholders' equity ratio	15.5%	10.2%	12.3%	10% or more
Free cash flow	22.3 billion yen	13.9 billion yen	15.3 billion yen	10.0 billion yen or more

*1 Operating margin after amortization of intangible assets *2 Profit/(loss) for the year attributable to owners of the parent

Americas, in order to enhance the ROS of the entire Group. The primary challenge for achieving net profit, is to reduce the significant financial burden of high finance expenses.

Despite achieving the free cash flow target for three consecutive years, there has been no reduction in net interest-bearing debt. The balance of interest-bearing debt is affected by foreign exchange rates and other factors, which is why I previously stated that free cash flow is still insufficient.

The calculation of free cash flow is based on five main components. The key financial indicators are EBITDA, capital expenditures, working capital, finance expense, and taxation. Maximizing free cash flow requires maximizing EBITDA while minimizing capital expenditures, working capital, finance expense, and taxation. The increase in EBITDA is in line with the rise in operating profit, which was achieved through the implementation of RP24's structural reform initiatives across the entire Group. Capital expenditures increased due to the need for cold repairs and strategic investments in glass manufacturing capacity and capability. As previously stated, we will enhance monitoring of profitability following capital expenditure. We reduce finance expense by reducing interest-bearing debt.

Regarding taxation, our objective is to optimize the effective tax rate over the medium to long term. However, it will take some time before we see results because we must first review the Group's business structure with attention to tax compliance so that we can effectively utilize deferred tax assets. In regard to working capital management, we have launched an internal project to illustrate the inventory/ accounts receivable/ accounts payable turnover period, and cash conversion cycle, and to monitor monthly results since FY2024/3. The results so far have been positive, however, in the second half, especially in the fourth quarter, the Group encountered supply chain challenges from customers in the Automotive Glass business. There was a discrepancy between the accuracy of sales forecasts and the Group's supply chain, resulting to further enhancements in Group's working capital management.

CFO Message

■ Towards FY2025/3

The year FY2025/3 is of particular significance as it is the first year of the new medium-term plan, "2030 Vision : Shift the Phase". Four "D"s strategies have been established to achieve the financial targets, while four "F"s strategies have been put in place to implement them. However, there is still much work to be done. It is important to define and share the milestones to guarantee their implementation. It would also be beneficial to consider innovative approaches to achieve the 2030 Vision of 10% ROS, while simultaneously planning for the future.

In the light of the 10% ROS goal, our initial focus will be on enhancing working capital and capital expenditures. To establish a system for generating free cash flow, we will develop the projects launched in the previous year. In regard to working

capital, dedicated employees will be responsible for monitoring inventory, accounts receivable, accounts payable turnover periods and cash conversion cycles. These processes will be closely tracked using more detailed reporting and KPIs, allowing for comprehensive management and forecasting of future trends. With regard to capital expenditures, we will implement management improvements following investment. While the impact will not be immediate, I will provide financial and business partner support to the "Business Development" area, particularly among the "Four D's", with the goal of increasing business profitability and achieving a ROS of 10%.

Our current internal systems resources are insufficient to achieve this goal. There is a significant amount of work to be done, and we are operating too manually if we extend the existing methods. It is therefore important to select the most

appropriate course of action. We need to enhance the existing process while ensuring available resources. To achieve this, we are leveraging "Digital Transformation" among the four "D"s to fundamentally change the way we do things. For example, our Group currently depends on manual data collection from each business and region for management accounting purposes, which is a labor-intensive process. It would be beneficial to reduce labor costs through DX, such as implementing a new system, and reallocate labor to more creative tasks, such as refining break-even point calculations and supporting strategy formulation.

■ The new medium-term plan "2030 Vision : Shift the Phase"

In the new medium-term plan "2030 Vision : Shift the Phase", we have expanded our financial targets to include not only ROS but also the absolute amount of operating profit and interest-bearing debt. We have included this operating profit figure in light of my experience that business growth is essential for employee growth. For the Group, the primary driver of business growth is not revenue but operating profit, which is based on our business. Therefore, we have set an absolute target for operating profit growth to facilitate growth of our business and our employee base at the same time. On the other hand, it is not feasible to prioritize absolute levels of operating profit at the expense of relative profitability. Consequently, we maintain our ROS target, as a continuation of our previous approach.

In regard to interest-bearing debt, as previously noted in the review of RP24, we are facing a significant financial burden in

terms of both profit and loss, as well as cash flow. If we do not reduce these expenses, we will be unable to increase net profit, reduce interest-bearing debt itself, or return profits to shareholders in the future. Our objective is to reduce interest-bearing debt on a gross basis rather than net basis, given the direct impact this has on financial expenses.

In regard to ROE, while the TSE (Tokyo Stock Exchange) has requested that companies with a ROE below 8% to take action, the "2030 Vision : Shift the Phase" strategy states that "Monitoring ROE improvement should be considered a reference indicator, not a goal in itself". While we acknowledge the importance of improving ROE as a listed company, our current ROE exceeds 8% by a relatively small amount, due to our status as a highly leveraged company with significant interest-bearing debt. Based on the financial plan underlying the "2030 Vision: Shift the Phase" strategy, we anticipate achieving ROE of approximately 20% by FY2027/3. In view of the circumstances, we have opted not to set ROE as a target, but to utilize it as a reference for monitoring and improvement while ensuring an

appropriate level of leverage each year.

In terms of our financial targets, I consider operating profit a key priority. This is because it is a primary driver of business growth, free cash flow generation and debt reduction. Reducing our interest-bearing debt is a key financial objective.

In regard to cash allocation, our plans have been formulated with a focus on allocating a greater proportion to strategic investments than was the case in the past. We are now confident that strategic investments will facilitate business growth and have allocated JPY 100 billion for this purpose. We anticipate that EBITDA and proceeds from asset sales will serve as the primary sources. EBITDA has exceeded JPY 80 billion in FY2024/3, driven by growth in operating profit. Given the previous practice of postponing cold repairs as much as possible to reduce costs and cash under RP24, the situation has changed drastically. This marks a significant shift in strategy "Shift the Phase".

CFO Message

When making capital investment decisions, we consider not only the potential profitability of the investment, but also its impact on cash flow, including payback periods. This ensures that the investment will generate a sufficient return on the capital cost. We will also explore the use of third-party financing, such as government subsidies, in addition to our own capital, for investment purposes. In order to determine the optimal capital investment, it is essential to profitability and fundraising strategies.

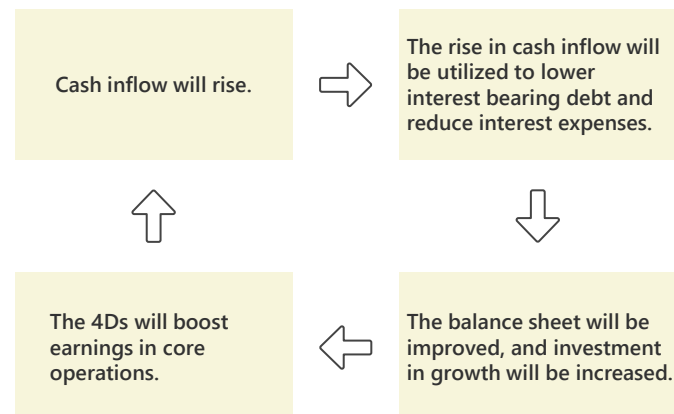
Furthermore, it is important that we prioritize the repayment of excessive interest-bearing debt over returning cash to shareholders, such as the redemption of Class A shares and the resumption of dividends. As previously stated, our primary financial challenge is the burden of excessive interest-bearing debt. To break free from this vicious cycle, we must reduce the excessive financial expenses that result from it. It is not possible to maximize net profit regardless of how much we maximize operating profit and cash flow. Consequently, we will not be able to make progress in repaying interest-bearing debt, and

our shareholders' equity ratio will not improve. The Group will continue to pursue financial targets for FY2027/3, including the reduction of interest-bearing debt based on the "four D's". Decisions will be made regarding the redemption of Class A shares and the implementation of shareholder returns, depending on the financial situation in the latter half of the period following FY2028/3.

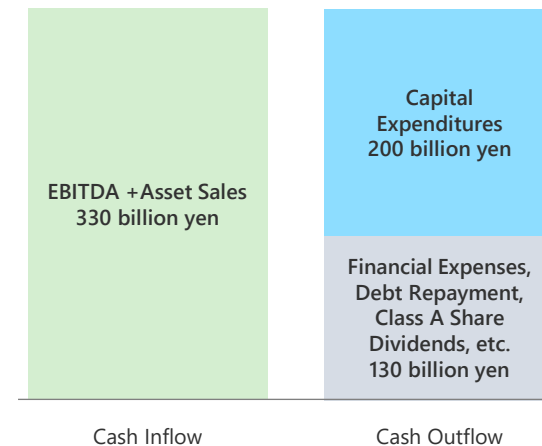
Market interest rates are rising in Japan while discussions are underway regarding reductions in Europe and the USA. We will closely examine these interest rate scenarios and explore ways to alter the currency composition of interest-bearing debt with the aim of reducing financial expenses to the greatest extent possible. As previously disclosed, the issuance of senior unsecured notes in the USA through a private placement method has enabled repayment of bank debt, benefitting the diversity of the Group's funding sources and leading to an increase in the average period to maturity of financial indebtedness. The redemption of Class A class shares in the latter half of the planning period would also help to reduce the

burden from their dividends. We will conduct a review of our debt capital structures. With regard to the shareholders' equity ratio, our financial target of 15% for FY2027/3 is insufficient. Therefore, we will pursue a further strengthening of our capital structure through the steady accumulation of net profits.

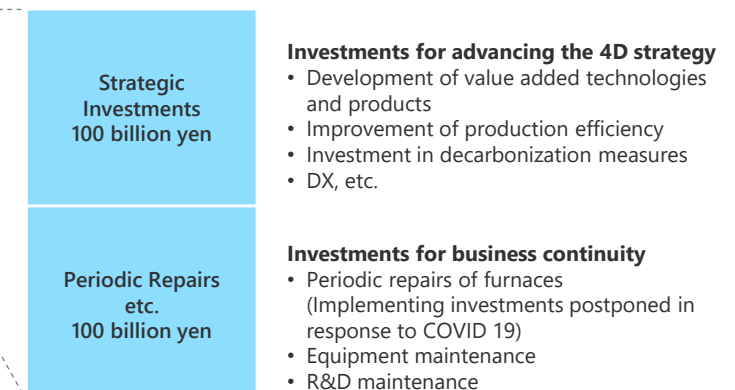
Financial Policy



Cash Allocation for the First Half of this MT (FY25 - 27)



Breakdown of Capital Expenditures



CFO Message

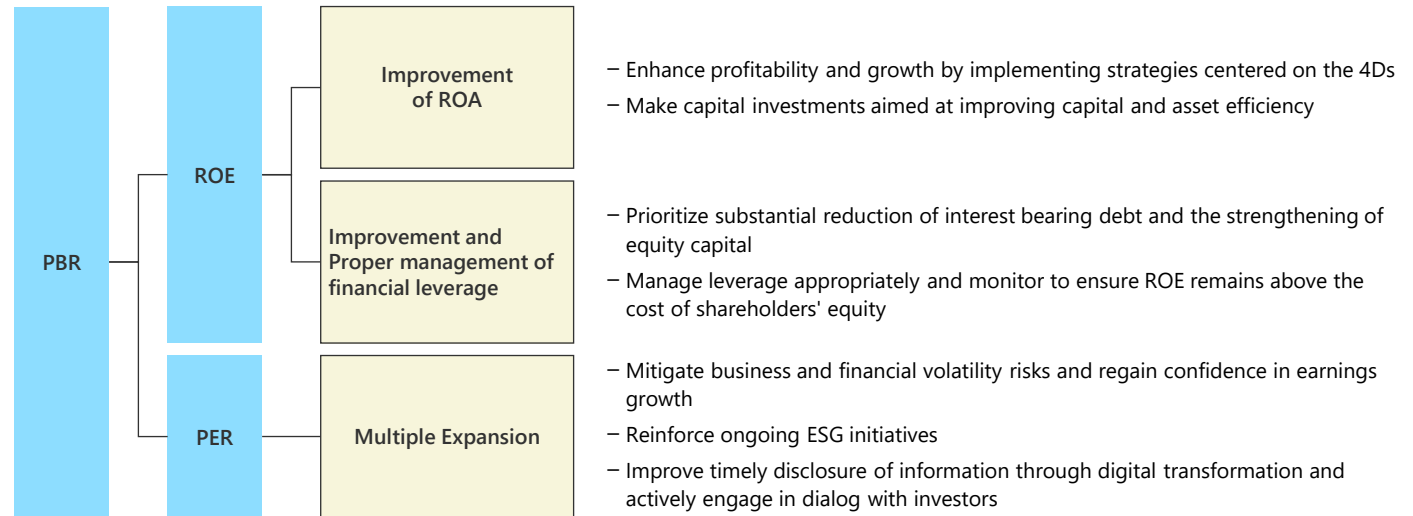
Corporate Value Enhancement

To enhance corporate value, it is important to optimize cash flows, thereby minimizing interest-bearing debt and strengthening the capital structure. At the same time, we must maintain communication with the market, including analysts, investors, and shareholders, and continue to disclose information in a transparent manner. In terms of information disclosure, I believe that we have been able to conduct effective activities with a small number of stakeholders so far, as evidenced by our receipt of the "Rookie of the Year" at the NIKKEI Integrated Report Award 2023. We aim to further enhance dialogue and information disclosure to provide various stakeholders with a comprehensive understanding of the Group and attract long-term, stable investment.

The stock price has not met expectations, in part due to the FY2024/3 results and the FY2025/3 forecast not aligning with market expectations. Some companies are taking steps to maintain or improve their share prices by returning profits to shareholders through dividend increases and share buybacks to achieve PBR of 1x, as requested by the TSE. In FY2023/3, we recorded significant goodwill and intangible asset impairment losses in our European Automotive Glass business, which has significantly reduced the risk of further similar charges to net profit and shareholders' equity. We are also beginning to see sustainable business profitability and cash flow generation. We intend to reinforce these capabilities over the next three years. Once we have established a sustainable financial base, we will be able to provide a solid return to shareholders. In this regard, the initial three-year period of the plan is very important.

Given that PBR is calculated with ROE multiplied by PER, it is reasonable to expect ROE to reach a reasonably high level in line with the financial plan behind the "2030 Vision : Shift the Phase". The PER has been volatile, fluctuating between net income and net loss, which has resulted in high degree of volatility in the

Managing with Focus on Capital Cost and Share Price (PBR > 1)



share price. However, if the Group continues to generate net profit based on the current financial plan, there is potential for improvement. If we meet the financial targets of "2030 Vision : Shift the Phase", we believe it will be possible to achieve a PBR of 1x as a natural consequence.

For this reason, it is extremely important to achieve the financial targets of the new medium-term plan. I am confident that achieving these targets will lead to an increase in our corporate value, which will in turn result in an improvement in our stock price. We will implement each item in the "2030 Vision : Shift the Phase" in strategy in the order in which they are presented. As CFO, I am committed to fostering a corporate culture that aligns with our aspiration of achieving a 10% ROS by 2030. It is essential for employees at all levels to understand their role in reaching this goal, and to break down their tasks into achievable monthly, weekly, or daily objectives.



Special Feature

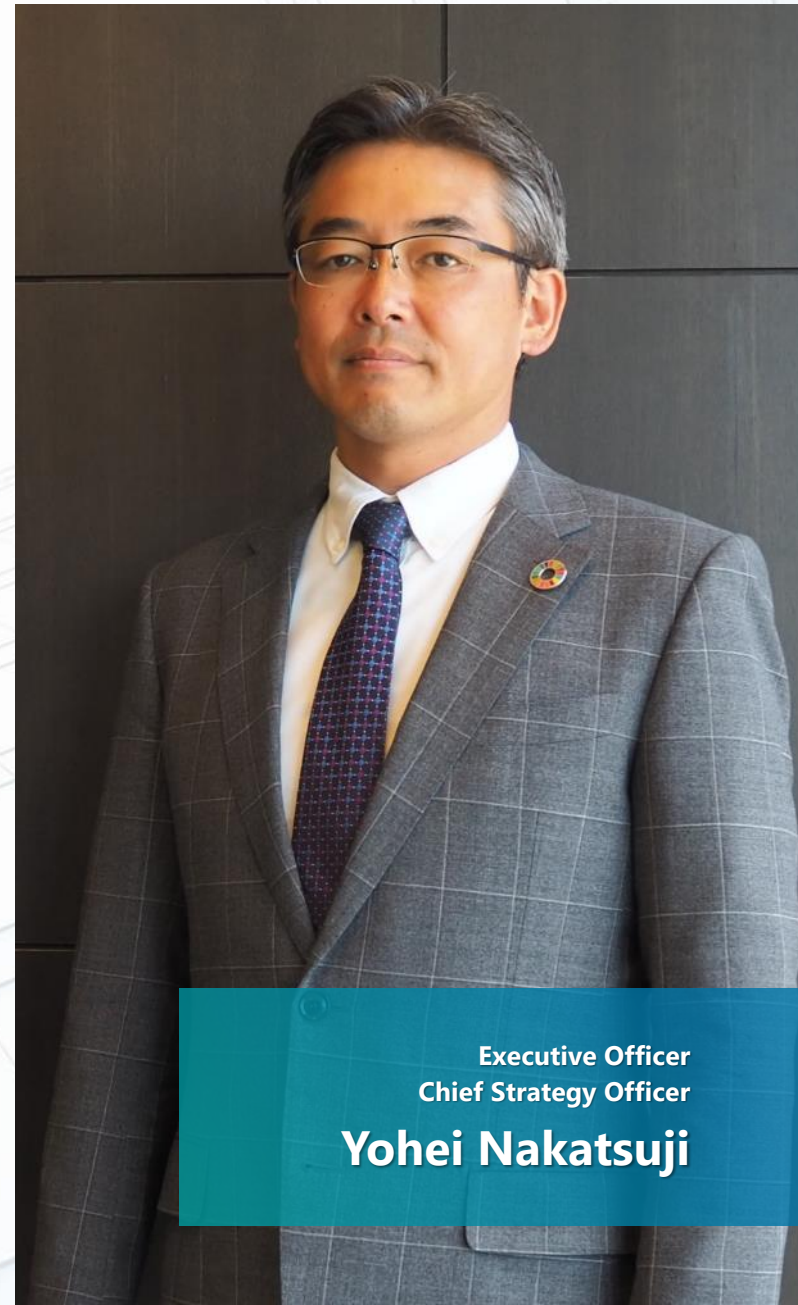
Medium-Term Plan

2030 Vision : Shift the Phase

CSO Message

Relationship between CSO (Chief Strategy Officer) and the new medium-term plan "2030 Vision : Shift the Phase"

I joined the NSG Group in February last year and appointed as CSO in April. My mission as CSO is mainly to formulate and promote business strategies from a medium to long-term perspective. The formulation of this new medium-term plan was our biggest mission in the last fiscal year. After my appointment as CSO, I first decided on the concept for the new medium-term plan, including the perspective, time frame, and roles to be played. Then, I discussed its contents with the businesses and functions, and worked on the plan. In developing the plan, we were conscious of the need for a sense of unity as a group, or "One Team," as the CEO often uses the term, and consistency between the Group's medium-term plan and the medium-term plans of each business. We confirmed through repeated meetings that everyone was facing the same direction. Although we have thus formulated our new medium-term plan "2030 Vision : Shift the Phase", our view of the future will continue to change in accordance with our changing circumstances. We will continue to monitor the progress of the medium-term plan by reviewing such changes together with preparing the annual budget.



Executive Officer
Chief Strategy Officer

Yohei Nakatsuji

Special Feature Interview : CSO Message

After one year as CSO

I believe that strength in the field is our very strength. We are not a cash-rich company, and there were times when we could not invest aggressively. However, we have continued to make choices based on what our strengths are and where we need to develop, and our strengths have been refined. For example, the operation of float lines in Architectural Glass business, especially online coating technology, has developed as a highly promising technology. We also have the technology to develop and manufacture high value-added and competitive products, including advanced processing technology in our Automotive Glass business and product development capabilities in our Technical Glass business. On the other hand, one point that needs to be improved is the low level of information integration throughout the Group. Although it is unavoidable due to

business characteristics, such as the strong local production for local consumption in the glass industry, and the fact that products of Architectural and Automotive Glass businesses are different, I still feel that accounting information and systems are not sufficiently integrated. The low level of information integration is not conducive to our desire to achieve "One Team" globally united management.

In fact, I left the Group once and rejoined again in February 2023. After rejoining, I thought that there should be more objectivity in the valuation of our businesses. Business portfolio management is one of the most important management issues, and all companies are working on it. It is sure that PBR is important, but the multiple of corporate value evaluation of Japanese companies is generally very low. This is

partly due to the low level of thoroughness of business portfolio management. It is important to evaluate the performance of each business objectively with an awareness of its cost of capital, and how to steer the company based on the results. For example, in our case, in addition to the general idea of what to do with Automotive Glass business and what to do with Architectural Glass business, it is also necessary to look at the business evaluation unit from a different perspective, such as focusing on businesses by region or within a business unit. I think it is necessary to discuss from a group management perspective not only the businesses that are not performing well, but also the businesses that have high growth potential and profitability as a unit, and how to improve or accelerate these businesses.

Review of the previous medium-term plan "Revival Plan 24 (RP24)"

From a CSO perspective, I believe that RP24 successfully executed the "business restructuring" outlined in the "Three Reforms" section. The main ones are: ① the growth of the glass for solar panels, ② the integration of the Business Innovation Center (BIC) into Technical Glass business, and ③ the integration of Automotive Glass business into a single organizational structure for the new vehicle and aftermarket glass businesses. This is part of the structural change in manufacturing facilities and organizational structure, and more than the numbers show, it is a milestone for future growth, leading to "Business Development" in the four "D"s.

On the other hand, the operating margin remains an issue. The actual operating margin for FY2024/3 was 4.3%, about half of the RP24 target of 8%. I think that the issue is not only that

half is not good enough, but also that this level has not changed since the past. We have to dig deeper to find out why the operating margin is low and why it has remained flat. Businesses have both good times and bad times. I believe it is necessary to carefully understand the mechanism of such profit swings and take countermeasures. It is true that the Group is susceptible to market volatility because we operate with large fixed assets, the float lines. However, we need to review our structure to raise profitability rather than just being affected by volatility. I believe this is an area that needs to be addressed at the Group level.



Special Feature Interview : CSO Message

New Medium-Term Plan "2030 Vision : Shift the Phase" (in General)

In the new medium-term plan, "2030 Vision" and "Our Vision," which is the management principle of the Group, we use the same word "Vision", but "Our Vision" is a vision of "how we want to be," while "2030 Vision" is a more specific vision of "how we want to be at a certain point in time.

As the goal for 2030 is set "to shift the company's phase and become vital in advancing a sustainable society", we want the company to become a valuable entity through the new medium-term plan. First and foremost, a company continues to exist because it has value. For example, we want to become a company that has value for all stakeholders, such as return for investors, product value for customers, etc. We want to become a company that people appreciate.

"Shift the Phase" also means that the future is not an extension of the past. We cannot reach the future we are aiming for by continuing to do what we have done in the past with even more effort so we must change the phase. We need to rethink each and every one of our perspectives and ways of thinking. This means questioning and rethinking what we used to think was right, what we used to take for granted, and what we used to think would never change. Without this accumulation, we cannot change. To change the output, the input equation must be changed. "Shift the Phase" is to change that input equation.

To cite a specific example, for "Digital Transformation" which is one of the four "D"s, we will promote standardization of our information systems. This has never been done before, and was originally intended to accommodate ERP system migration through version updates. Then it was discussed whether we can consolidate such systems into only three, being one for each of Architectural Glass, Automotive Glass, and Technical Glass. After various discussions, it was decided that we should cover the

GOAL

To shift our company's phase and become vital in advancing a sustainable society

Commitment

- We commit to creating value that realizes a sustainable society for all stakeholders and with stakeholders.
- We commit to developing and providing glass and its related technologies and services that play a crucial role in our customers' solutions.
- We commit to deeply understanding our customers' potential needs and delivering solutions that are suitable for them by leveraging both tangible and intangible assets.
- We commit to continuing our investment in our people, taking pride in a global, diverse team passionate about glass and brimming with talent.

three businesses with a single core system on a global basis. How to define the core and standardize the core and raise the level of operations is important, and we will radically improve the degree of integration of all information. The impact on process change is so great that it will replace the infrastructure, tools, information sources, and definitions we have been using. By making a quantum leap in the level of information integration, we can change management. We need to question and change common sense.

Glass manufacturing is a business where there is not much room for product differentiation. On the other hand, customer needs are diversifying, including decarbonization, and we want to hone our ability to anticipate and understand what our customers want. We must think in terms of our ideas exceeding customer expectations. Upstream, which manufactures flat glass, is limited because of its inflexibility, but we have a technology of online coating. We are beginning to think about room for improvement in both Architectural and Automotive Glass businesses, for example, solving this problem through flexibility in the downstream processing of flat glass. So in the Architectural Glass business, we will invest in online coating and

downstream businesses that contribute to differentiation. In the Automotive Glass business, we will capture customer needs by enhancing advanced production technologies such as APBL (Advanced Press Bending for Laminated glass). The biggest change in "Business Development" is to have a thought process from the customer's perspective. And as a market principle, if there is a need for the value we produce, we can maintain optimal sales prices. Without a customer focus, we cannot generate an improvement in profit.

"2030 Vision : The Envisioned state of NSG Group" is a six-year plan, rather than the conventional three-year plan, taking into account the nature of the Group's business style and the market demand change cycle. In Architectural Glass business, we are taking into account government and municipal trends toward decarbonization, and in Automotive Glass business, mainly the development cycle of new vehicles. We felt it was necessary to look ahead about six years in order to proactively initiate change.

Special Feature Interview : CSO Message

Shift the Phase

To strengthen new product and business development efforts

Business Development

As part of our contribution to societal decarbonization

Decarbonization

Through high-value operations utilizing digital technologies to their full extent

Digital Transformation

In order to realize a truly diverse and inclusive team that brings about the phase shift we need

Diverse Talent

The reason we then set our financial targets for FY2027/3 is a matter of predictability. We thought it would make sense to set targets at a transitional point three years from now, given the impact of changes in the external environment. In addition, from this time forward, we will be rolling out our medium-term plan internally. This is because we believe that we must always question the present with looking to the future, and since the future moves forward year by year, the medium-term plan is to constantly keep an eye on the future and feed back to the present. This thought process and planning process also led us to formulate the plan by backcasting from the vision we aim to realize in 2030. The basic starting point is the "2030 Vision," and the financial targets are the numerical expression of this "vision" and the methods to realize them are the four "D"s as the "Group's wide strategic directions".

The original idea of the four "D"s has already been mentioned in the CEO's message in the previous Integrated Report as a strategy for the future, but at the beginning of the formulation of this new medium-term plan, we thought a lot about whether to include the four "D"s and in what order. In the end, however, we decided on the form shown in the medium-

term plan as a result of considering the priority of the issues to be solved by the Group.

Three of the four "D"s are non-financial in nature, but of course this does not mean that financials are neglected.

A company is in a sense a system, some of which appear on the surface as a system (financials) and some of which work inside (DX, human resources). Focusing on any one of them for improvement may be effective as a coping strategy, but I believe it is insufficient for improving the overall performance of the company in the medium to long term. In order to raise the profitability, we need to look at the entire management mechanism and upgrade it. The entire mechanism and environment must be aligned to ensure that the targeted performance is achieved. I believe that the Group's performance can be improved by firmly implementing all four "D"s, rather than specializing and prioritizing any one of them. On the other hand, there are some who question the positioning of investments in areas without an obvious financial return, given the need to improve financial strength, but we recognize that "decarbonization," for example, is a natural requirement for existence in society. The return on such investments has a

relatively long time horizon and indirect impact on corporate value. The four "D"s are formulated based on our materiality, and we will monitor progress by setting KPI for materiality. We will also promote activities with a firm awareness of the goals of each program. For example, the objective of "Digital Transformation" is to improve the level of information integration and promote operational efficiency, and as a result, we aim to eliminate the consolidated accounting system currently in operation and reduce the amount of resources required to prepare performance report materials. When "Diverse Talent" achieves its goal, it will enable global talent management, and each employee will be able to contribute to the improvement of the Group's performance.

Special Feature Interview : CSO Message

When formulating the new medium-term plan, the opinions of various stakeholders are taken into consideration.

First of all, we had many discussions with the Board of Directors. We have shaped the medium-term plan through discussions that went into its concept, the level of the goals, the prioritization of important agendas including the four "D"s, and the content of each agenda item. In addition to the regular Board of Directors meetings, intensive off-site discussions were held several times, and we received a variety of advice.

When I heard an employee say that "I have no idea where this company is headed," when I visited an overseas factory, I knew that was exactly what we needed to address. As I mentioned at the outset, this was something I was always aware of when formulating the new medium-term plan. Based on this, we discussed for a year to clarify the direction of the Group and where it should be centered, and the direction of each business and function at the same time, to ensure alignment between their directions.

In the position as CSO, I do not have many opportunities to communicate directly with our customers, suppliers, and

shareholders, but I am aware of the opinions of shareholders at general shareholders' meetings. At our general shareholders' meetings, we receive harsh comments from shareholders about our stagnant stock price and long period of non-dividend payments. "Shift the Phase" expresses our desire to become a company that, in addition to being able to make the necessary growth investments, is also able to provide dividends and other shareholder returns after changing phases as a company. In formulating this medium-term plan, we have been conscious of how to enhance our corporate value.

We not only referred to the records of our usual IR meetings, but also communicated directly with analysts of securities firms who cover our company to get their opinions, including the thoughts of the institutional investors behind them. Through these interviews, we were able to confirm that there were high expectations for our company, namely, expectations for our unique businesses and corporate existence value, and we were reminded that "Business Development" is an essential theme.

The consultants who advised us on the formulation of the new medium-term plan were very critical, saying, "If you don't



change your ways of doing things, if you are as now, the future will be tough". On the other hand, they also gave us positive comments such as, "You have these strengths," and "The profitability of Automotive Glass business is certainly difficult, but your manufacturing capabilities, including technology and human resources, are at a considerably high level globally, and we have what are advantageous". We were confronted with the fact that we should look at ourselves objectively, consider what we should do as a group management, and look at reality as reality, without being condescending, without being conceited, and without having easy and baseless reassurances that we will be all right.

Adapting to societal changes, we will develop new solutions and technologies with our customers to create high added value

We will enhance our business creation capabilities by continuing to invest in R&D and fostering the skills of our personnel in business development within the glass and related areas.

Identifying areas where new value is demanded and creating new solutions together with customers.

- Identifying and focusing on areas of potential new value creation
- Co-creating value with customers
 - Strengthening our relationships with customers who are committed to new value creation
 - Adapting our technology to contribute to customers' technological goals
 - Turning the adapted technologies into business together with customers

Developing new, valuable technologies and services while taking pride in our history of creating world first technologies and expertise

- Further evolving our proprietary technologies and expanding their applications
- Developing new technologies in areas that contribute to sustainability, informed by societal trends

We will maintain our focus on capital costs in prioritizing projects and allocating resources, through governance exercised in Management Committee.

Special Feature Interview : CSO Message

New Medium-Term Plan "2030 Vision: Shift the Phase" (in specific)

Business Development

The Group says "Adapting to societal changes, we will develop new solutions and technologies with our customers to create high added value". We believe that we should be aware of the multilayered social changes, both in long and short-period. The surrounding environment differs from customer to customer. For example, in the Architectural Glass business, the technological changes in solar panels are extremely rapid, and we are also developing technologies to meet the needs of our customers. On the other hand, for ordinary window glass, window glass has not been largely changed for a long period of time in many countries. After identifying what kind of changes are taking place and what kind of customers are in the midst of these changes, we need to ask ourselves why our customers have needs, why they are in trouble, and why our company can help their business by providing this product or service. We must determine the customer's environment ourselves, rather than simply doing as we are told. Each customer's environment is different, and we must understand it. I believe that the customer's environment is also our environment, and we can develop our business by taking a medium- to long-term perspective based on its outlook.

Our business environment is diverse in the footprint itself. Within that diversity, we have both mature markets such as developed countries and growing markets such as South America. It is a great advantage to have both. It is especially good that we have a strong market position in South America. There are growing markets in the world where populations and numbers of young people are increasing.

I believe that this is an opportunity for the Group in a country and a society which has a growing Architectural Glass market. There are many more opportunities in regions where we

Examples of Strategic Products to be Strengthened through Business Development

Architectural Glass



- Products that contribute to the decarbonization of buildings
- Products that enhance the potential of solar technology

Automotive Glass



- Products that contribute to the advancement of automobiles

Technical Glass



- Products that enable the development of high performance components
- Products contributing to environmental conservation such as reduction of microplastics

have not yet developed our business, so we also would like to work on regional expansion in the future. In Automotive Glass business, there is no doubt that functional requirements for glass for ADAS and EVs will continue to change. I believe that glass will become increasingly substrates, and it will not be important that it is glass, but that glass must be used because certain functions must be added, and glass, rather than film or plastic, is necessary for those functions. Glass is also highly recyclable. The use of cullet is effective for decarbonization, and as the social need for decarbonization expands, we expect to see a more widespread reevaluation of glass. For example, in Technical Glass business, microplastics are being replaced by glass beads and flakes, and the advantages of glass itself are creating new value through the filter of decarbonization. By understanding these changes in the customer environment, we believe that there are still business development opportunities in glass itself.

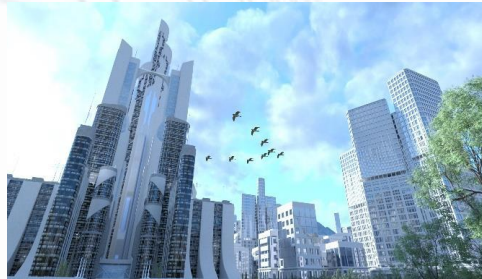
In RP24, product examples were categorized across businesses according to the three areas of contribution in the

medium-term vision ("safety and comfort", "eco society" and "information and communication technology"), but in this "2030 Vision : Shift the Phase", strategic products are defined by business. When final products that are useful to society, such as decarbonization, and the method of providing such products change, we believe that developing products with the customer in mind is the best way to determine the fields of business to be addressed by each business clearly. So, I thought that it was important to develop products concretely that can provide value to customers and society from a management perspective. The products that can provide value to customers and society will not be same forever, but will constantly change, so unless we specifically identify them, we will not know which products to focus on, and these focus products will be continually reviewed. In "Business Development", the percentage of strategic products to total sales will be measured as the achievement of KPIs.

Special Feature Interview : CSO Message

In this context, in the Architectural Glass business, "we aim to become a leading supplier of architectural glass that contributes to sustainability, with a focus on decarbonization". As I mentioned earlier, differentiation is quite difficult, but I believe it can be solved through downstream flexibility. Buildings are private property as objects, but they are extremely public as entities. Because they are close to public property, I think they must be socially valuable. It is very important for us to find and offer what we can contribute to make buildings valuable.

One perspective is decarbonization and energy control, and another is biodiversity. We can contribute to biodiversity with products like Pilkington **AviSafe™**. The important thing is that we ourselves develop, market, and disseminate our products with a focus on increasing the value of the building itself. I believe that the way to win in the market is to listen to our customers to find out what is needed to increase the value of buildings, and to be ready to carry out any development activities that we can, so that society will recognize what we want to do and that we are capable of doing it. Even with products that are difficult to differentiate, our ability to differentiate differs greatly depending on how society perceives us. We understand that whether customers come to us first, or whether we can become such a presence, is what it means to be in a leading position in society. For example, in North America, we are fully utilizing our online coating technology, as exemplified by products such as Pilkington **Optiwhite™**, Pilkington **OptiShower™**, and others. We first implement a clear customer segmentation process, and then we understand our customers in the segment very well. We understand what each customer wants and we tell them what we can do for them. We are contacted when there is an inconvenience or need at the



customer. We then give them the relevant samples, or if necessary, we make new ones and offer them. We receive the customer's response, and if there is room for further improvement, we rework the product to match our own specifications to the customer's requirements. As a result, there are many types of glass with seemingly similar performance in terms of numbers, but there are differences in actual use. This, if we can build such a position by ourselves, is important in the B to B. We describe it as "Responsive" there, which is our extremely proactive response.

For Automotive Glass business, improving its operating profit margin is essential to the Group's operating profit margin improvement, whose targets are 7% for FY2027/3 and 10% for FY2030/3. The organizational integration of the New Vehicle and Aftermarket glass businesses is intended to give us a holistic view of the supply chain in order for us to be competitive and profitable. The supply chain begins with the sourcing of glass and ends with the shipping of new vehicle glass and aftermarket glass as a product. There are various external and internal processes in this process, and it is very important to be able to create a model that can be consistently optimized. In the future, especially as ADAS becomes mainstream, it will be necessary to look at the supply chain as a whole, rather than simply making glass because ADAS has functionality. As a result, we can optimize our procurement and development strategies as well as cash management including inventory control. It also allows us to make the right decisions on how to allocate our assets. For example, in Poland, we have replaced some of our production lines for new vehicles with lines for aftermarket. We will be able to think not

in terms of the assets for new vehicle glass business because they are located in its place, but in terms of the one organization as Automotive Glass business, and how they should be allocated in the supply chain of Automotive Glass business as a whole. I believe that if we can fully optimize this process, the Group can become very strong. I am optimistic about the future of Automotive Glass business.

Regarding Technical Glass business, its operating profit margin is high, so we expect to expand the scale of business through "business expansion in adjacent markets" and "commercialization of new technologies". Seeds are steadily growing. As I mentioned in my review of RP24, we integrated the BIC into Technical Glass business as a part of "Business structure reform". In the process, we discarded technologies that had been developed and technologies that were suspended. The technologies that have been developed are being commercialized. A good example is that of coating liquids which actually absorb infrared rays. These have been adopted by customers manufacturing infrared absorbing filters, and our coating agents are used by manufacturers of lenses for smartphones. This can significantly reduce reflections on the surface of lenses and filters and improve the image quality of photos and videos. Although the scale of the business will not

suddenly expand significantly, some products are certainly moving toward commercialization.



Special Feature Interview : CSO Message

Decarbonization

Regarding the decarbonization trend required of companies by 2030, 2050, especially 2030, I think that there may be a social swing, whatever the extent in accordance with progress in social infrastructure development, etc. However, I do not think the trend will stop. Both infrastructure and decarbonization technologies are still being developed and upgraded, albeit locally. I think there will be a moment when the various programs that are being promoted at different points or on different time frames will come together, and the entire social structure will be established. When this happens, I believe that change will accelerate rather rapidly. The flow will never stop, and there will be a rapid acceleration at some point. We will not stop the flow in anticipation of that acceleration. Investments for "decarbonization" are included as a part of our strategic investments.

Digital Transformation

As I mentioned in the general discussion, digital is the way to improve both quality and speed, so we will implement this at all levels. The main measures at the Group level will be standardization of ERP systems, and at sites and factories, analysis of big data including management of efficiency of float furnaces and improvement of product quality as well as efficiency using big data. Digital technology should change the dichotomy of "efficiency or quality" to compatibility of both "efficiency and quality". It is important for us to implement these firmly in line with their objectives in the three layers described in the new medium-term plan such as "Group Management", "Business/Functions" and "Sites/Plants".

Especially regarding integration of ERP system, the actual current situation of the Group is that information integration is still in a low level. This is the point that I mentioned in my

discussion about the need for improvement in the future. If the level of information integration is low, even if we belong to the same group and do the same business, we cannot know what the person next to us is doing, and we are not connected horizontally. PMI in digital means raising the level of information integration, and that is why we have positioned this initiative as the "second PMI". We have not completed PMI after the Pilkington acquisition. We would like to complete the integration of information that we have not been able to do.

On the other hand, I assume that there are not necessarily many companies that are able to fully standardize their systems in their global business. Therefore, I don't think there is any need to demean us. However, we cannot meet the expectations of the market if things continue as they are. I think we should have confidence in our efforts to complete standardization on a global scale. It is what we ourselves have to do, and we ourselves can do at the same time. In addition to crossing regional and national characteristics because we are implementing it globally, we also cross businesses because we have different businesses even within the same glass, which is a distinctive and meaningful point that differs from other companies' DX.

Regarding our "Digital Transformation", as mentioned in the CEO's message in the last integrated report, a steering committee which is specialized for DX has started under the CSO. Originally, the Group had only a vague idea of what DX should be and the direction it should aim for. Although there was a roadmap for improving the ERP system, there was no end-state of what would be achieved as a result. The steering committee decided to standardize it on a global basis. The decision was not an easy one to make, each business and function were not sure why we needed to discuss such a thing in the first place because they were told from the Group while they carried out their own DX. So we spent a lot of time carefully to

make sure we were all in a row to have the same perception about aligning ourselves with each organization and job. This determination of direction is a huge achievement, and now that it is set, we have a clear common understanding that this is an agenda which must be considered and action must be taken including how to move forward with standardization in other layers as well as the revamping of the ERP system in the Group layer, and how to deploy the great approaches developed in one region again in other regions, although the development of standardization is still to be addressed in the future. Through this series of discussions, my own confidence in the leadership team has deepened. I am confident that with the eyes of the leaders of each function at the forefront aligned, the reforms we are aiming for will be carried out without fail.

Capital Markets & Communities

- Timely disclosure of appropriate and reliable information

Group Management

- Faster and quality decision making
- Strengthened governance
- Improved operational efficiency and scalability
- Operation cost reduction

Capability Enhancements through DX

Customers & Suppliers

- Increased transparency/accessibility of information
- Better product/service quality
- Improved and faster development process

Employees

- Reduced workload, Ensured operational continuity
- Better utilized employee skills
- Enhanced transparency, Clarity of responsibilities
- Quicker, delegated, decision making based on information

Special Feature Interview : CSO Message

Diverse Talent

I have chosen "Diverse Talent" where "Talent" is added to "Diverse" instead of "Diversity" because the important thing is not the state of "diversity" but having diverse "people (talents, abilities)". I think of diversity not simply as nationality or gender differences, but as different and diverse points of view. For example, even within Japan people can have a completely different point of view, and the point of view can differ depending on whether the person is a new graduate or a mid-career hire. The word "diversity" tends to be biased toward gender diversity, and we wanted to avoid that. It is true that gender diversity is important, but society is not only about that. Even the operation of a single factory requires diverse human resources (abilities), including those who melt materials of glass, those who cut glass, those who transport product, those who manage production, those who manage demand, and those who sell the product. While racial and gender diversity is important in that it provides more points of view, from the perspective of corporate management, a company is an aggregate of people with various abilities, and without recognizing, and appreciating these abilities, the company will not be able to keep going. As a result, this will support the earnings of the company. On the other hand, we also set targets in terms of gender. If the work



environment is not supportive to women, it will limit the pool of valuable human resources. In order to attract a diverse workforce, I believe it is necessary to create a comfortable working environment for all genders.

"Investments" to be made based on the HR strategy include mainly investments in IT systems for HR. Without this, talent management cannot be implemented on a global basis. The goal is that no matter which country a person is from or what the work background of the person is (factory operator, accounting accountant in finance), if a person has great abilities, they should be able to take the appropriate position in the Group globally and lead the Group's performance. To do so, it is impossible to utilize human resources unless we know where they are, how they are performing, and what they are doing. This is also important from the perspective of providing opportunities to develop such human resources, and the digitization of talent management is inevitable.



It is not enough for any one of the above four "D"s to be outstandingly successful, and each must be managed as a component of the corporate mechanism. I myself will promote the program with leaders around the world from the perspective of group management.

Materiality

Executive Officer Sustainability Director

Shiro Kobayashi

In accordance with the NSG Group Sustainability Policy, our group has identified material issues that must be recognized in order to achieve both sustainable growth for the company and the realization of a sustainable society over the medium to long term.

In drawing up our medium-term management plan, we have recently re-examined our material issues. We have reviewed this to clarify the company's policy that safety is a prerequisite for our business, and have separated "health and safety," which was previously included as part of "human capital," into a separate material issue, and have divided it into two categories: one as a basic element of management and the other as a source of competitiveness.

The three materiality issues of "health and safety," "ethics and compliance," and "safe, high-quality products and services" are the highest priorities for the entire Group, and we will manage them as basic management issues that must be achieved in the course of business operations and will continue to raise awareness and make improvements.

The three materialities of "environment," "social shift innovation" and "human capital," which are the source of competitiveness, correspond to the four "D"s (Business Development, Decarbonization, Diverse Talent, Digital Transformation) of this medium-term plan, and we will strategically address them in the new medium-term plan to improve corporate value.

Materiality Identification Process

Each topic was categorized by referring to the classifications in standards such as SASB, IIRC and GRI, and the social impact (Impact on Social Value) on each stakeholder and the financial impact (Impact on Corporate Value) on the company were scored and evaluated on two axes, and items with high scores were selected as "priority areas". In assigning scores, we took into account the perspectives of the various stakeholders surrounding our company, such as investors, employees, customers, business partners in the value chain, and local

residents. Of these, corporate governance and ensuring a financial base have a very strong impact on the company and are the foundation of the company, so we are addressing these as issues that the Group will focus on separately from the selection of materiality. This materiality assessment result was discussed at the Sustainability Committee and approved at the Board of Directors Meeting in FY2024/3.

In addition, we are currently preparing a new assessment (double materiality assessment) to comply with the requirements of the European Corporate Sustainability Reporting Directive (CSRD).

Materiality

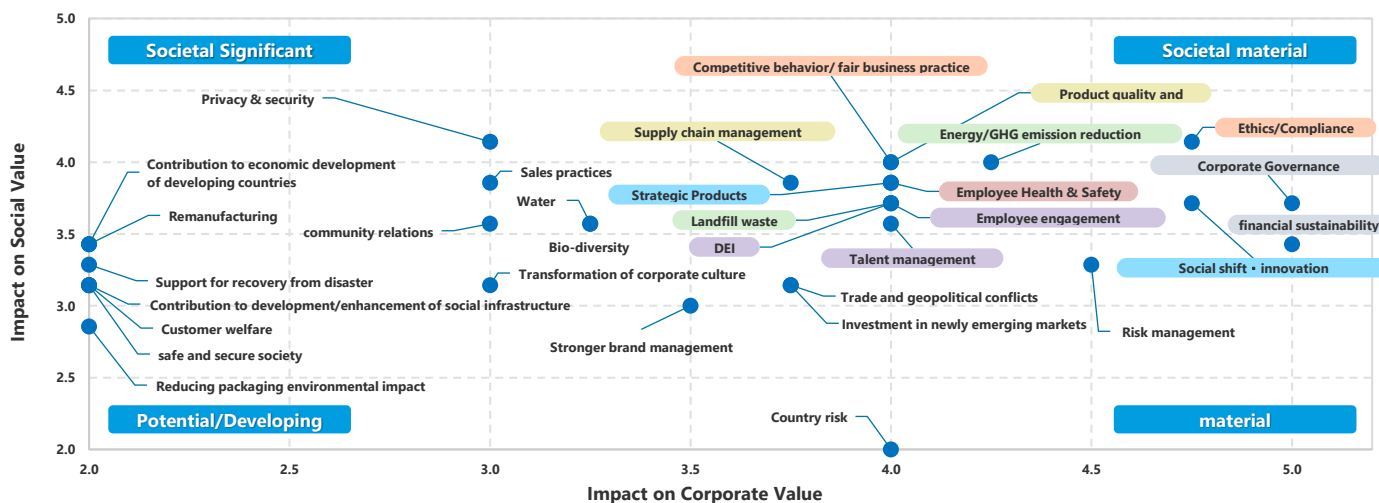


Management policy

As a fundamental management matter that must be achieved in the conduct of business, it is managed as a top priority for the Group as a whole, and it is continuously enlightened and improved.

Business Development Decarbonization Strategic initiatives to improve corporate value
Diverse Talent Digital Transformation

Revised NSG Sustainable Value Matrix



Materiality




















Status of achievement of targets for FY2024/3

Although some targets were not met, we were generally able to achieve our goals. Reductions in absolute Scope 1+2 emissions were also progressing smoothly, and by the fiscal year ending March 2024, we had achieved a 15% reduction, half of the SBTi well below 2°C target (30% reduction by 2030 compared to 2018). In terms of responsible procurement, there were also some

areas where KPIs improved significantly, such as the average Eco Vadis score of suppliers, which greatly exceeded the target.

On the other hand, we did not achieve our targets for reducing landfill waste and improving the severity injury rate (SIR). These are long-term issues that are in a phase where it is not easy to make improvements, but as mentioned in the next section, we plan to raise the targets for some of them in the next medium-term plan and tackle them with a new approach.

FY2024/3 targets and FY2024/3 achievement

	FY2024/3 target	FY2024/3 achievement	SDGs
Environment	● 8 % reduction in CO ₂ intensity across glass manufacturing operations compared to FY2018/3	KPI of 0.69 kg CO ₂ (e) / tonne glass (e) was measured during FY2024/3. This represents a 5.5% YoY improvement in the KPI since FY2023/3 (0.73 kg) and a 8% improvement vs baseline of FY2018/3 (0.75 kg). This improvement was achieved via a combination of the continued efficiency improvements associated with the implementation of the NSG Group energy & carbon efficiency management program and increased activity in the procurement of renewable forms of energy.	 
	● 20 % reduction of waste to landfill compared to FY2020/3	Waste to landfill remains 21.6 kt in FY2024/3 versus FY2023/3. This is a 2.3% improvement versus the baseline FY2020/3, only.	
Human Capital	● Reduction of Significant Injury Rate (20 % vs. FY2020/3)	Significant Injury Rate was 0.32, a 3% increase compared to FY2020/3. The cause is thought to be the lack of safety training for the new leaders. We will raise the target for the FY2027/3 and work towards achieving the target with a new approach.	
	● Employee Engagement, "Our Vision" penetration ratio (80 %)*	In an employee attitude survey conducted in November 2023, 86% responded positively to the question on whether their immediate supervisor's decisions are in line with the core values of Our Vision, confirming that the penetration of Our Vision among employees is improving.	
	● Female managers in NSG Group – 12.7% as of 2021 June 30th – FY2024/3 target : female manager increase at least 1% in each SBU and Function compared to 2021 June 30th	Female managers in NSG Group was 16% as of FY 2024/3 by 3.3% improvement. For 2027/3, we will raise our targets even higher, check our progress once a year, and share best practices to aim for further improvement.	
Safe and High-quality Products and Services / Responsible sourcing	● To achieve and maintain a 95 % acceptance of the NSG Supplier Code of Conduct by our key suppliers.	94% of Key suppliers have agreed to the Supplier Code of Conduct or can demonstrate their own equivalent code, achieved the target. This is an improvement of 4 points compared to FY2021/3. We will continue our efforts to improve the acceptance rate of the Supplier Code of Conduct with regard to key themes such as human rights and the environment.	  
	● To assess and monitor the sustainability performance of 65 % of our suppliers by external spend.	EcoVadis sustainability assessments completed for 65% of external supplier spend, achieved the target. Compared to 52% for the fiscal year ending March 2022, there was a significant improvement of 13%. We have raised our targets for the fiscal year ending March 2027.	  
	● To achieve and maintain an average 50 sustainability score for all assessed suppliers.	Average scoring of all suppliers Ecovadis assessments reached 61 and achieved the target. In particular, the number of suppliers with low scores has decreased, leading to an improvement in scores.	  
Ethics & Compliance	● Hotline utilization (Actual vs. benchmark data)	NSG Group received 174 reports for FY2024/3 (Decrease by 1 point from FY2023/3). The benchmark for similar-sized enterprises in number of employees is 275 according to an external consulting firm. Group E&C continues to analyze variance between the number of the actually received reports vs. the benchmark data.	
	● Increase of concern reports from Manager's Report Form targeting 30 % of the total report	The ratio of reports from Manager's Report Form (MRF) was 27 % of the total reports in FY2024/3 (Decrease by 7 points from FY2023/3). Group E&C continues to promote MRF via various communication channels such as internal bulletins and newsletters.	
	● Education completion ratio (95 % completion by managers by 5 days before the deadline of the education campaign)	98.4 % of Key Roles completed relevant trainings during the annual education campaign in FY2024/3. 77 % of managers completed by 5 days before the deadline. Group E&C will continuously make its best effort to raise the training completion rates.	
	● Top level communications (Minimum four annually (CEO/C-Suite))	Top level communications regarding ethics and compliance were made four times during the fiscal year such as the message video by CEO and regional SBU heads during Ethics and Compliance Week 2023 and new CE&CO Introduction.	

Materiality

New Sustainability targets and KPIs

In line with the new medium-term plan starting from FY2025/3, the Group has set new sustainability targets and KPIs for the six materiality issues. It has identified as key issues to be addressed by the Group.

Health and Safety (Items separated in the new MTP)

We will continue to aim for zero fatalities. We will significantly raise our target for the significant injury rate (SIR) and work towards achieving it through new approaches such as introducing AI and CCTV cameras at our manufacturing sites.

Ethics and Compliance

As we have now become to receive a consistent number of reports through the hotline system (quantity aspect), we have set a new target focusing on the content of the reports (quality aspect). In addition, the feedback on Ethics and Compliance program including Ethics and Compliance Weeks we have received to date shows that there have been still fears among people about possible retaliation for reporting concerns. To enhance the reliability of the Reporting of Concerns system we have set a new target of zero incidents of retaliation. Furthermore, we have also set a KPI regarding employees' evaluation on the compliance program for its further improvement. For details, please refer to the "[Ethics and Compliance](#)" section of the "Social" chapter.

Safe and High-quality Products and Services

With regard to quality, we have set a new target of "zero major quality spikes (Quality incidents that affect external customers and have a financial impact of over 100 million yen)". In the supply chain, we have raised the targets in several areas in light of the status of achievement of the targets for the fiscal year ending March 2024. Specifically, we have set a target of increasing the penetration rate of the Sustainable Supply Chain

Charter, which is more advanced than the Supplier Code of Conduct. We have also increased the target for the supplier assessment coverage rate to 74%. We will continue to work towards achieving our targets by promoting the Sustainable Supply Chain Charter to our suppliers. In addition, we have newly specified reduction targets for Scope 3. We aim to achieve our Scope 3 reduction targets through ongoing engagement with suppliers involved in these hot spots. For details, please refer to the "[Safe and high-quality products and services](#)" section of the Social chapter.

Environment

In addition to raising our CO₂ reduction target per unit of production, we have also newly specified a target for the ratio of renewable electricity. Although renewable electricity is easily affected by market price fluctuations, we will aim to further increase the ratio through our efforts to seek more economically viable procurement methods on a global level. For details of our initiatives, please refer to "[TCFD · Climate Change](#)" section and "[Energy](#)" section of the Environment chapter. In addition, due to the effects of climate change, social anxiety about water resources has been increasing in recent years. In order to respond to these social issues, we have set a target to reduce water withdrawal by 50% in water stressed area. Furthermore, there is an accelerating trend towards a circular economy. In response to this trend, we have set a new target for the recycling of glass resources. In particular, in the Automotive Glass business, we are actively promoting glass recycling initiatives in collaboration with our customers. This will also contribute to the realization of a decarbonized society. For details of our initiatives, please refer to "[Contributions through Business \(Sustainability and Products\)](#)" section and "[Water](#)" section of the Environment chapter.

Social shift and Innovation

We have newly set quantitative sustainability targets for this

item. The target we have set this time is to increase the sales composition ratio of strategic products. In particular, we aim to achieve this target by expanding sales of strategic products such as glass for solar panels which is one of our mainstay products, automotive glass such as head-up displays and roof lights for the future expansion of the EV market, and high-function glass products such as LPH (LED print heads) and multi-core optical connectors for data centers that support immersion cooling and address the issue of energy conservation in the future increase in data distribution volume. We aim to achieve this target by expanding sales of strategic products. For more details, please refer to "[Business Overview Topics](#)" section of the Digest chapter and "Contributions through Business (Sustainability and Products)" section of the Environment chapter.




















Human Capital

With regard to employee engagement, we have set a new goal of improving the "Employee Value Proposition". The measurement indicator will be the question "Would you recommend the NSG Group as a good place to work (Net promoting score, NPS)" in the internal employee attitude survey "Your Voice". In the survey in November 2023, it showed a high correlation with the results of the questions about the company's sustainability initiatives, and the results were interesting in that they suggested that the company's initiatives for sustainability have a positive effect on employee awareness, which in turn contributes to improving corporate value. We aim to achieve our KPI targets by implementing internal training on employer branding and making use of social media, etc. With regard to DEI, we have raised our targets even higher in light of the Japanese government's target for the ratio of female managers (30% by 2030). For details of our initiatives regarding human capital, please refer to the "[Human Resources](#)" section of the Social chapter.

The details are as follows.















Materiality

Materiality Targets (Fundamental Management Matter)

Materiality	FY30 Aspirations	FY27 New Targets		FY27 KPIs	17 Sustainable Development Goals (169 targets)	
Health and Safety	Under the strong leadership, a safety culture has been fostered in which all consider safety as a value and work together to build a safe workplace. All risks are properly managed. Particularly for critical risks, a high level of control is in place. The use of digital technology has significantly improved the level of control.	Fatality	Fatality and life-changing disability	0		8.8
		Ethics and Compliance injury ratio (SIR)		0.20		8.8
Ethics and Compliance	Partner and gain trust from stakeholders by regularly improving the Ethics and Compliance (E&C) programs to address Group risks.	Ratio of substantiated E&C hotline reports		45%		16.5
		Cases of retaliation reported to E&C		0		16.5
		Fines associated with Competition or Bribery/Corruption violations		0		16.5
		Ethics and Compliance (E&C) Annual Education		100% completion with achievement or improvement of any above KPIs		16.5
		Compliance Program Score and Effectiveness		90% agreement/favorability		16.5
Safe and High-quality Products and Services	To implement a Sustainable Supply Chain strategy to minimize negative environmental and societal impact, increase innovation, reduce waste and risk and enhance NSG's brand	Supply Chain	Scope3	2.6 MT		13.3
		Supplier collaboration	Supplier spend signing up to Supply Chain Charter	63%	  	8.7 / 12.4 / 17.16
			Supplier spend with recognized ESG assessment	74%	  	8.7 / 12.4 / 17.16
			A weighted average score for all assessed suppliers	Over 60	  	8.7 / 12.4 / 17.16
			Supplier spend with Diverse Suppliers	2%		10.3
	Customer satisfaction remains as a core mission for the Group. The objective to supply of safe and high-quality products and services has been enhanced by incorporating a greater degree of automation and digitalization into our processes.	Quality	Major quality spike (Quality incidents that affect external customers and have a financial impact of over 100 million yen)	0		9.1

Materiality

Materiality Targets (Sources of Competitiveness)

Materiality	FY30 Aspirations	FY27 New Targets		FY27 KPIs	17 Sustainable Development Goals (169 targets)	
Environment	To exceed stakeholder expectations by implementing sustainable processes to produce environmentally positive products and actively contribute to a decarbonized and a circular based society.		CO ₂ intensity	3% YoY reduction	 	7.2 / 7.3 / 13.2
		Carbon emission	Renewable energy electricity ratio	65%	 	7.2 / 7.3 / 13.2
			Absolute Scope1+2	Reduction	 	7.2 / 7.3 / 13.2
		Waste to landfill		20% reduction (vs FY24)		12.5
		Cullet ratio		3% point increase vs FY19	  	7.3 / 12.5 / 13.2
		Water withdraw		50% decrease vs FY19 in water stressed areas		6.4
Social shift and Innovation	With the strength of NSG's unique glass technologies, we aim to be a trusted partner for the stakeholders and contribute to the realization of a sustainable society.	% Sales of the strategic products		From 23% to 29%		9.4
Human Capital	Employee Value Proposition: A globally consistent employer brand that is relevant, differentiates NSG from its competitors and allows for local adaptation. The value proposition will be distinctive, aspirational but will maintain authenticity.	Employee Engagement	% agreement for NPS question from "Your Voice" survey	80%	 	4.4 / 8.5
		DEI	Female manager ratio	24% (FY24 result: 16%)		5.5

TCFD • Climate Change

NSG Group's initiatives to decarbonize and reduce environmental impact

As an energy-intensive and carbon-intensive manufacturing company, tackling climate change is essential for the Group.

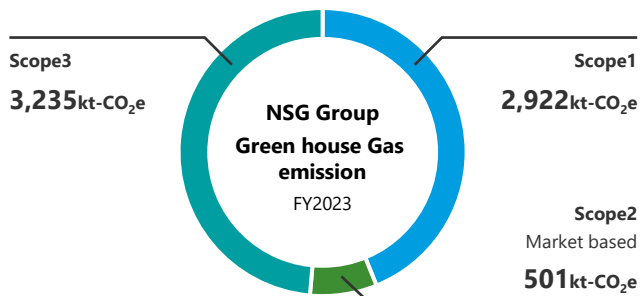
Contributing to a decarbonized society through our products and services will help us fulfil our mission to "Changing our surroundings, improving our world". We are actively working towards social issues such as climate change, contributing to a sustainable society and increasing our corporate value. The Group continues to endorse the TCFD, with actions including increasing the intensity and scope (to include all three emission scopes) of SBTi verified decarbonization targets in May 2022 (original verification in 2019). It has also committed to achieving carbon neutrality by 2050. The implementation of the roadmap to achieve this will lead to a reduction in CO₂ emissions and, in turn, to the continued development of Sustainability and products and the expansion of opportunities related to our business.

^{*1} SBTi is a partnership between CDP (former Carbon Disclosure Project), UN Global Compact, WRI (World Resources Institute) and WWF (World Wildlife Fund), which helps companies set the science-based goals for reducing GHG emissions to prevent the impact of climate change.

^{*2} Scope 1: Direct emissions by business operators (Use of fuel in manufacturing processes, etc.)

^{*3} Scope 2 Location: Indirect emissions by consumption of energy sources (Purchased electricity used in manufacturing processes, etc.)

^{*4} Scope 3: Value chain emissions including both upstream and downstream of the organization's activities. Because >99.9% of our GHG emissions are CO₂, thereafter we only mention CO₂



Initiatives to reduce Scope 1 (own emissions)

We are considering a range of technical options to reduce Scope 1 emissions, including:

1. Use of alternative fuels: we are actively engaged in technological development initiatives, such as the world's first successful production of float glass using hydrogen energy in September 2021, as well as the successful production of glass using 100% biofuels in February 2022. From 2025, the Group is planning to begin construction of a green hydrogen production plant^{*5} at its UK Green Gate facility with funding support from the UK government and will expand production of low-carbon glass from 2027. As a result, the Group expects the plant to reduce CO₂ emissions by 15,000 tonnes per year. Procuring fuels on a larger scale at competitive prices is particularly important for hydrogen and biofuels. Long-term contracts with suppliers, as well as securing production sites and stable supplies of fuels in the vicinity of the sites, are some of the initiatives being promoted by the purchasing team to support reductions in Scope 1.

2. Electric melting of glass: efforts are being made to increase the amount of renewable electricity used as a substitute to fossil fuel in the glass production process. This includes a plan that from 2025, a project increasing to the highest level ever achieved within the Group for electric melting will be implemented with the support of the German Government. We are planning to gradually introduce this system to other offices by 2030, and we are drawing up a roadmap at a global level.

3. Substitution of glassmaking raw materials: during the glass melting process, large amounts of carbon dioxide are emitted due

to decomposition of CO₂ containing raw materials in the furnace and it accounts for about 20% of our Scope 1 and Scope 2 emissions. In order to reduce the carbon dioxide emissions from these raw materials, attempts are being made to replace the carbonates in the material with various oxides: in 2022, glass production using "Dolime" (CaOMgO) was successfully achieved in a float furnace in Chile; Previous research has shown that, in addition to the CO₂ reduction effect derived from the raw materials, there is also an energy reduction effect from using Dolime. The handling of the powder is an issue for the future. Studies will continue in 2024

4. Carbon capture: the process for capturing CO₂ emissions from glass melting furnaces is not compatible with typical CO₂ capture processes, so we are working with a process development partner that is likely to be compatible with our needs. In March 2024, we began the first demonstration experiment for carbon capture in the flat glass industry in Europe at our float furnace in the UK.^{*6} One of C-Capture's carbon capture solvent compatibility units (CCSCUs) has now been deployed at Pilkington UK's float furnace at the Greengate glass manufacturing site in St Helens, part of NSG Group.

^{*5} : [NSG Group Plans Pioneering Hydrogen Plant in UK](#)

^{*6} : [Successful Start to Europe's First Carbon Capture Trial in Flat Glass Industry](#)

TCFD • Climate Change

Initiatives to reduce Scope 2 (own emissions)

The Group has set a target of 50% renewable electricity by the end of 2024. In response to the new medium-term plan announced in 2024, the Group set a new sustainability target of increasing the ratio of renewable electricity. To support this target, the Group continues to invest in on-site power generation including installing on-site solar power at the Lathom Research Institute in the UK and the Rossford plant in Ohio, USA. Many other solar projects are underway across the Group. We are also actively introducing power source certification and Power Purchase Agreements (PPA agreements) on a global basis. In March 2024, our Maizuru Plant became the first of our Group's domestic plants to sign a PPA contract for renewable electricity generated by solar panels installed on the plant grounds, and installation work began^{*1}. Against a backdrop of global CO₂ reduction efforts, there is an increasing demand for green power in the market, and with the risk of rising electricity prices, we are continuing our efforts to find the most economically rational procurement method from among various options on a global level, aiming for stable procurement of renewable energy in the medium to long term.

^{*1}: [NSG Group Sign a PPA for Solar Power in Maizuru Plant, Japan](#) 

Initiatives to reduce Scope 3

In 2022, the Group launched a Sustainable Supply Chain Committee to examine sustainable supply chains with regard to all factors, including environmental and social aspects. In the course of its activities, it is also working on reducing Scope 3 emissions. In 2024, we held a cross-departmental Scope 3 workshop with the participation of various key members of the Group. We have drawn up a group-wide roadmap for achieving our Scope 3 reduction targets for 2030, and in order to achieve this, we recognized the importance of improving our internal data collection system and continuing dialog with key suppliers. We are working with actual suppliers to obtain emissions data and share best practice alongside various other initiatives.

Information disclosure in line with TCFD

Governance

Climate-related risks and opportunities are overseen by the Board of Directors, and the Group CEO and Board of Directors set the basic policies and targets for the Group's sustainability activities, including climate change. Climate change-related issues are discussed by the Executive Committee, the Sustainability Committee and the Strategic Risk Committee with the aim of achieving all sustainability targets and linking them to all relevant business. This includes strategies and actions based on risk and opportunity analyzes to achieve both corporate growth and a positive social contribution; the Board members, who are experts in the field of ESG, provide input and guidance. Activities and progress in each area, such as the status of energy and CO₂ emissions reductions in each business unit, are managed by a sub-committee of the Sustainability Committee.

In FY2024/3, discussions focused on continuing progress and prioritizing activities in the Decarbonization Action Plan, which is necessary to achieve the new targets approved by the SBTi in May 2022. In addition, we will support the realization of the four "D"s, including decarbonization, by aligning the new medium-term plan with the sustainability strategy. A key aspect has been to identify product groups that contribute to positive impact on society, and set out the desired state for each materiality in the new medium-term plan for 2030. We have set out the targets to be achieved in 2030 for each materiality, and by backcasting from there, we have formulated KPIs for each of the years from FY2025/3 to FY2027/3.

NSG Group's governance structure for sustainability



TCFD • Climate Change

Strategy - Risks, opportunities and responses related to climate change in the short, medium and long term.

The Group has carried out an analysis of the risks and opportunities associated with climate change in the short (1-2 years), medium (2-4 years) and long term (>5 years, usually up to 15 years) according to the following three main scenarios to identify physical and transition risks in the timescale to 2100.

Low-carbon world scenario (<2°C)	A scenario in which aggressive mitigation measures are taken to curb carbon emissions over the next 30 years, with the aim of transitioning to a low-carbon economy.
RCP 4.5 Medium stabilization scenario (2-3°C temperature rise)	Interim scenario, assuming that current policies, pledges and targets are achieved.
RCP 8.5 High reference scenario (>4°C)	A scenario in which global temperatures continue to rise substantially, with catastrophic consequences, as a result of continued emissions growth with little or no measures to avoid physical risks.

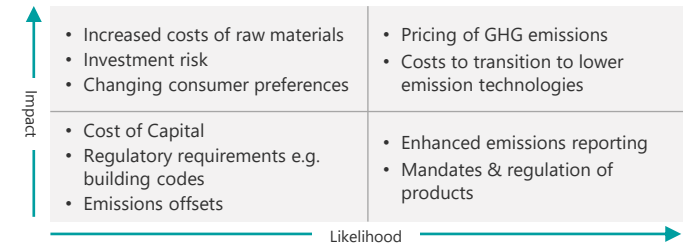
Risks and opportunities identified include the impact of

Current regulation	opportunities to supply high-performance products in relation to the European Energy Directive
New regulations	Risks of increased production costs through new emissions trading schemes (ETS), new European Emissions Trading Scheme (ETS) leading to opportunities for sharing high-performance energy-saving building products.
Technical Development	EV market and the growth of the energy-efficient buildings market.
Legal compliance	Risks and costs of meeting future compliance, opportunities for more stringent product demand, NSG's competitive product development, etc.
Market aspects	e.g. customer specifications for building / vehicle efficiency with associated opportunities for product development
Reputation	customer specifications for building / vehicle efficiency with associated opportunities for product development
Acute Physical risk	e.g. flood, typhoon risk impact to operations & value chain (supply continuity) opportunity for specific product development e.g. storm glazing.
Chronic Physical risk	e.g. sea level rise primarily risk impact to current and future operations and value chain.

The identified risks and opportunities have been quantified, categorized and prioritized accordingly in accordance with the Group's standard risk management framework. This includes impacts on policy and legal aspects, technical aspects, market aspects and reputational aspects. Last year, the analysis was further reviewed from the perspective of additional legislation, such as the European CSRD, and stakeholders, such as biodiversity, circularity and community impacts. Based on this new analysis, the NSG Group's next new medium-term plan will be developed.

Scope of assessment of annual impact and transition risk potential

- residuals in the long-term perspective (2035) under the 2050 net-zero scenario
Risk :



Examples of identified risks with high impact and urgency

Impact of Climate Change on NSG Group		Financial Impact	Urgency
Transition Risk (Low Carbon World Scenario)	Pricing of GHG emissions	Very high (>JPY 40 oku/yr)	Very likely to occur, high urgency for mitigation
	Costs to transition to lower emissions technology	Very high (>JPY 40 oku/yr)	
	Increased cost of raw materials	Very high (>JPY 40 oku/yr)	Likely to occur, medium urgency for mitigation
	Investment risk – unlisted from TSE prime market	Very high (>JPY 40 oku/yr)	
Physical Risk (RCP 8.5, 4°C Scenario)	Drought Stress	Medium (JPY 10 - 20 oku/yr)	Likely to occur, medium urgency for mitigation
	Chronic Heat	Low (1.2 - 10 JPY oku/yr)	

The risks and opportunities identified will be further reinforced and included in the Group's new medium-term plan, "2030 Vision : Shift the Phase", resulting in, for example, the Sustainable Supply Chain project, investment in research and technology development to reduce greenhouse gas emissions, and the development of new products that support the decarbonization of society.

These activities are in line with the Group's mission to "Changing our surroundings, improving our world". Based on the multiple global warming scenarios described above, a quantitative and qualitative analysis of resilience to climate change and prioritization of actions to be implemented in the future was also carried out. As a result, the Group's decarbonization targets over the medium to long term were developed based on the analysis that the risk with the highest impact and potential for the Group is an increase in the costs associated with the price of GHG emissions. The reduction targets developed by the Group were certified by the SBTi in 2019 and were updated in 2022 to more ambitious targets in line with a warming scenario well below the Paris Agreement's 2°C.

Compliance with this target will improve the Group's resilience to both physical and transition risks related to climate change. The review continued in 2023.

TCFD • Climate Change

Risk management

Climate-related risks are identified and monitored by the Strategic Risk Committee and assessed against quantitative criteria for four vectors: financial impact, business impact, compliance impact and external assessment impact. The Strategic Risk Committee assesses the controls and mitigations in place to address the risks and directs the implementation of additional measures where necessary. The risk owner is responsible for monitoring and reporting on progress against defined action plans to manage risks within the Group's tolerances. Individual controls, measures are progress managed within each business unit (SBU) and Group function and reported to the Executive Committee and Sustainability Committee. Specific risks and opportunities are reported regularly to the Strategic Risk Committee (at least once every six months) and to the Executive Committee to ensure integration of risk management and business strategy

Metrics and targets

The Group monitors all greenhouse gas (GHG) emissions affecting the entire Group (Scope 1 and 2), supply chain (Scope 3) and customers (Scope 3).The Group's SBTi's CO₂ emissions for the reference year (total for the year from January to December) are as follows: .

Scope1	Scope2 (location-based)	Scope3
3,103 thousand tonnes	1,050 thousand tonnes	2,513 thousand tonnes

The CO₂ emissions for the three scopes for the latest year (total for the year January-December 2023) were as follows.

Scope1	Scope2 (location-based)	Scope3
2,922 thousand tonnes	715 thousand tonnes	3,235 thousand tonnes

In addition, the trend in CO₂ emissions from 2018 to 2022 is as follows:

Carbon dioxide (thousand tonnes)	Scope1	Scope2		Scope3
		location-based	market-based	
2018	3,103	1,050	891	2,513
2019	2,970	885	790	2,819
2020	2,817	728	530	2,952
2021	3,031	731	648	3,556
2022	2,910	719	542	3,276
2023	2,922	715	501	3,235

*CO₂ emissions are the total for the year from January to December of each year.

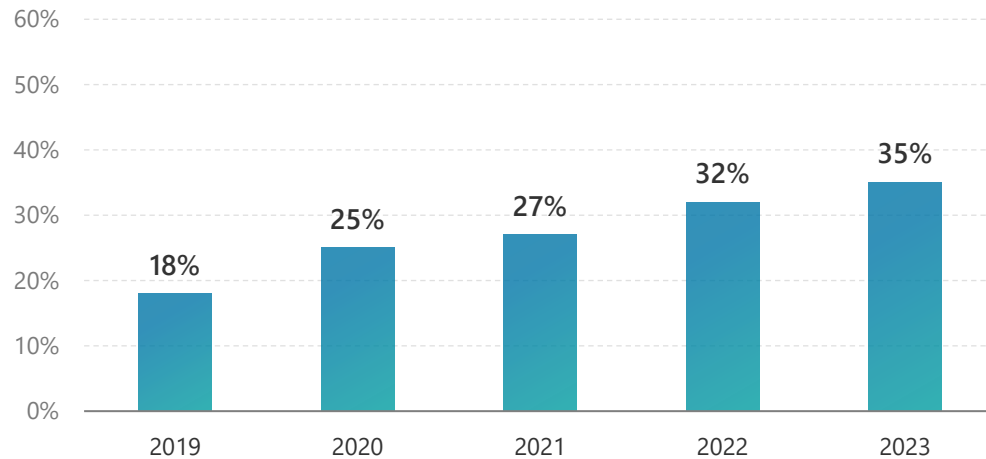
In the previous medium-term plan RP24, we have also worked towards our target of reducing greenhouse gas emissions per unit of production in the glass manufacturing process by 8% by FY2024/3 compared to FY2018/3. Result in FY2024/3 was 0.69, 5.5% better than in FY2023/3 and 8 % better than in FY2018/3, demonstrating the Group has achieved the goal.

The Group obtained SBTi certification in 2019 for its target to reduce Scope 1 and Scope 2 CO₂ emissions by 21% by 2030, but in 2021 the Group revised this target, raising it to a more ambitious target and setting a Scope 3 target. This revised target is to reduce Scope 1 and Scope 2 and Scope 3 CO₂ emissions by 30% by 2030 compared to 2018. A 1.5°C scenario is the preferred target setting, but this requires a significant reduction (halving) of our Scope 1 emissions, which account for nearly half of our CO₂ emissions. As our Scope 1 emissions are generated by the combustion of fossil fuels in the glass melting process, we need to switch to fuels from renewable energy sources in order to reduce our Scope 1 emissions. The technology development required for fuel conversion is progressing and does not require significant capital investment, but we do not expect to be able to supply the amount of green fuels we need until 2030 or later. The target is therefore set for a scenario well below 2°C, rather than the 1.5°C scenario. This target was approved by the SBTi in May 2022.

TCFD • Climate Change

As for reducing Scope 2 emission, good progress continues to be made towards the Group's commitment for increasing the proportion of renewable electricity consumption across the operations. In CY2023 the proportion of renewable electricity reached a level of 35% (CY2022 was 32%). The Group remains on track to deliver the CY2024 target of 50%. This target also continues within the Group new MTP, with a target of 65% renewable electricity proportion by the end of FY2027/3.

NSG Group – Renewable Electricity

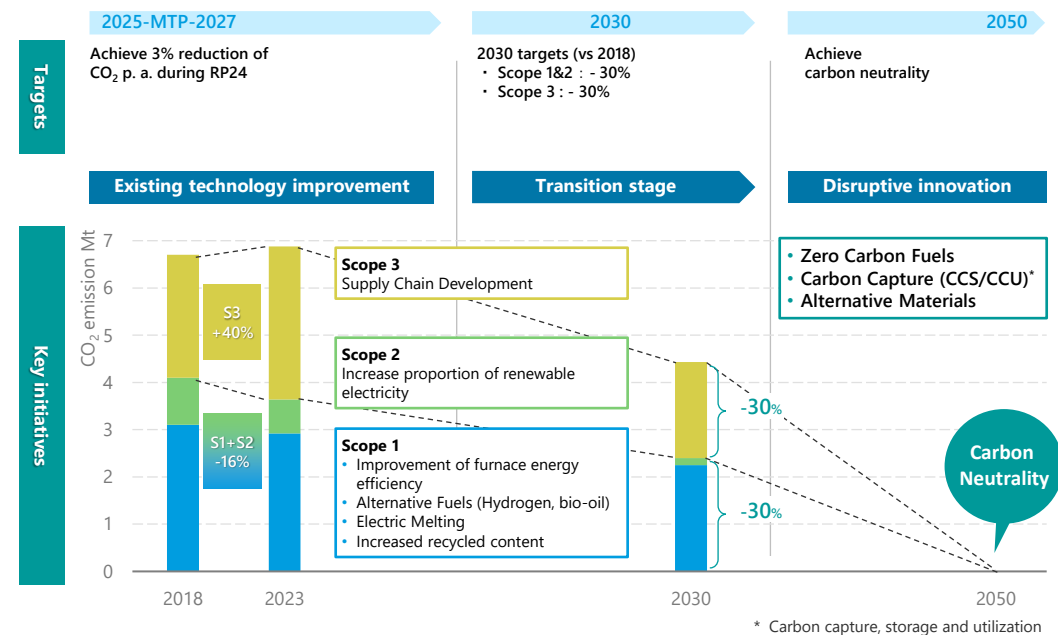


In FY2023/3, the NSG Group entered into a Sustainability Linked Loan Agreement with a link to three Climate Change Impact Indicators (KPIs). The KPIs were selected as indicators that are key to the NSG strategy to support decarbonization, including the reduction of CO₂ emissions (Scope 1 and Scope 2) mentioned above.

Carbon Neutrality

We are also committed to achieving carbon neutrality by 2050. This is in line with the Group's mission "Changing our surroundings, improving our world", as well as meeting the demands of our customers and investors and the expectations of our employees. The roadmap set out below is embedded as an action plan at Group-wide level and at local level, e.g. at production sites. The implementation of this roadmap will lead to a reduction in CO₂ emissions and, in turn, to the continuous development of Sustainability and products and the expansion of opportunities related to our business.

Roadmap to Carbon Neutrality for 2050



Sustainability and products

makechange™

The NSG Group has identified Environment as one of the key material aspects, which is an important issue for both medium and long-term sustainable corporate growth, as well as contributing to the realization of a sustainable society. Through the timely provision of our unique and valuable products and services, we aim to contribute to solving important social issues such as climate change and biodiversity.

Architectural Glass

Through their superior performance, our glass helps to play a crucial role in supporting these environmental and societal issues by improving the energy efficiency of buildings and helping to reduce CO₂ emissions and we feel this is an important business opportunity for us. To facilitate this activity, we have now launched a new sustainability communications platform, **makechange™**, which helps us to communicate our passion and commitment for positive change to support the business in sharing our sustainability messages.

Here are some examples of our environmentally friendly products that we offer.

NSG Group online coating capacity expansion

To meet the growing global demand for First Solar solar panels and NSG Transparent Conductive Oxide (TCO) glass, the Group successfully completed the conversion of its float glass production line in Johor Bahru, Malaysia during the 3rd quarter of FY2024/3. The facility was converted from the production of architectural and automotive products to TCO coated glass. The conversion of another Group line at Rossford, Ohio, USA from architectural and automotive float glass production to a solar TCO line began in September 2023 and is progressing, with an expected completion date in the first quarter of calendar year 2025.



These projects further support NSG's ongoing efforts to reduce the amount of carbon in our environment by enabling additional clean solar energy generated by First Solar's solar panels. A key consideration in these projects is proximity to the customer's facility, to reduce carbon impact related to transportation of our product.

Stakeholder Interview- First Solar's Recycling Strategy



First Solar, one of the largest customers of TCO coating provided by the NSG Group, is the world's leading manufacturer and distributor of thin-film solar panels. The company's solar technology, which uses a cadmium telluride (CdTe) semiconductor as opposed to the more common crystalline silicon, is the most eco-efficient available today with the lowest carbon and water footprints and fastest energy payback time.

In addition, First Solar is driving down the cost of recycling by continuously investing in technology improvements and have been recognized for their commitment to comprehensive life-cycle management. We recently talked with them about their strategy for recycling their panel to avoid environmental impact.

First Solar modules are designed for high-value recycling to

maximize material recovery at end-of-life (EOL) and recover more than 90% of module materials for reuse, providing high-quality secondary resources for new solar panels, glass, rubber, and aluminum products.

While most PV recycling processes focus only on recovering high-mass fraction materials such as glass and frames (i.e., bulk recycling), First Solar's high-value recycling process also provides closed-loop semiconductor recovery for use in new modules.

First Solar has a unique and long-standing leadership position in PV recycling as the only solar manufacturer with global in-house PV recycling capabilities and more than 15 years of experience operating high-value PV recycling facilities on a worldwide and industrial scale. Recognizing the importance of responsible product life cycle management, First Solar established the industry's first global solar panel recycling program in 2005 and has been investing in recycling technology improvements ever since.

"We have long understood our responsibility towards the planet, the community, and our customers, and are proud to place sustainability at the heart of everything we do, not just meeting industry standards but working to exceed them," said Michael Koralewski, Chief Supply Chain Officer of First Solar. "This philosophy drives our commitment to Responsible Solar and its core aspects, including recycling."

Sustainability and products

Lowest embodied carbon*¹ glass on the market

In October 23 2023, we successfully launched a new architectural glass product, Pilkington **Mirai**[™], which has since been independently verified as reducing CO₂e*² emission in its manufacturing process by 52%; which is the lowest on the glass façade market today. We arrived at Pilkington **Mirai**[™] through a series of technical world firsts, exceptional cross functional collaboration combined with a holistic approach to sustainability. Pilkington **Mirai**[™] offers a product range for future challenges: a simple, more sustainable alternative that enables building designers to make immediate improvements on the carbon impact of their projects as we move towards a sustainable future. The Z2 project by Züblin, one of the largest construction companies in Germany and a valued partner, is a milestone project. By specifying Pilkington **Mirai**[™] on their HQ, they exemplify their commitment to sustainable construction. Bringing forward solutions like our new low carbon glass range is central to the mission of NSG Group of "Changing our surroundings, improving our world".



*1: CO₂ emissions in the manufacturing process

*2: vs our standard glass product via an Environmental Product Declaration

renew:glass

Last year we launched *makechange*[™]; our strategic platform to help us communicate our passion and commitment for positive change to support the business in sharing our sustainability messages both internally and externally.



makechange[™]; consists of three Pillars: Embrace Change, Design for Change, Deliver Change. These three Pillars help us to organize our many sustainability activities and initiatives across all functions in a cohesive manner for our internal stakeholders and external audiences.

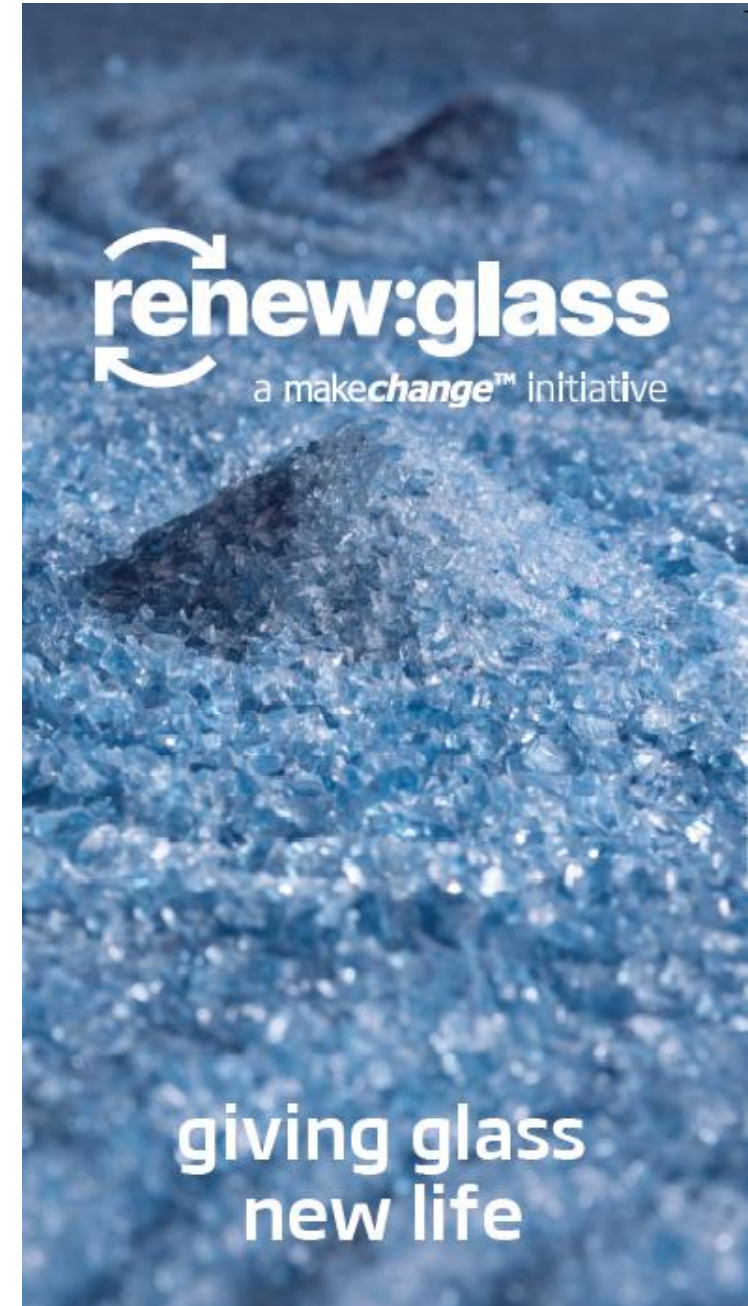
This year we further enhance our sustainability credentials by offering customers and partners the opportunity to recycle their glass with us under a new *makechange*[™] initiative called *renew:glass*.

Recycling 1 tonne of end-of-life glass saves approximately 700kg of CO₂ emissions, yet less than 1% of float glass in the world is recycled*³.

We can *makechange*[™] and support the transition to a circular glass economy and reduce the amount of glass ending up in landfill.

Under the *renew:glass* initiative, together with our partners, our goal is to increase the amount of float glass being responsibly recycled and give it new life. Our *renew:glass* initiative further reinforces our commitment to environmental responsibility and marks a significant step towards a sustainable future.

*3: World economic forum, "Circularity in the build environment: Maximizing CO₂ abatement & business opportunities", 2023



Sustainability and products

Automotive Glass

In recent years, the automotive industry has seen an increase in the importance of eco-cars, which are designed to reduce greenhouse gas emissions through electrification. In parallel, automotive glazed areas continue to increase in size, driven by the design, safety and styling benefits of fluid shapes, enhanced external visibility, lighter interiors and a greater desire for occupant interaction with the environment. NSG Group's superior press bending glass shaping technology and solar control products are fully capable of meeting the major changes in vehicle design brought about by this shift to an electrified powertrain, and are aiding the world's drive towards clean mobility.

Recycling initiatives for automotive glass

In recent years, the automotive industry has seen an increase in the importance of recycling and striving towards a circular economy to meet the environmental challenges linked to carbon neutrality targets.

Automotive Glazing do account for a non negligible amount of a vehicle carbon footprint from cradle to gate (5-6%) and therefore OEMs have started to set target to glass manufacturers with regards to recyclability and decarbonization to achieve their own decarbonization roadmap as well as being able to meet changes in legislation in particular in Europe but expected to be followed in other regions in the future. NSG in line with our Decarbonization strategy (one of the 4 pillars of our medium-term plan) has been undertaking an increasing number of initiatives to meet the requirements set by our automotive customers when it comes to decarbonization and recyclability and use of materials with high recycled content.

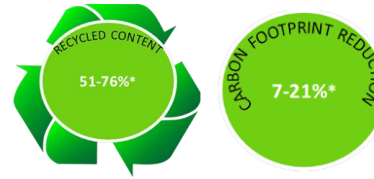
High Recycled content materials:

NSG is working closely with suppliers to provide materials with higher recycled content with dual benefits of lower carbon footprint and reducing the amount of virgin materials used. We have already validated some materials which we use to encapsulate our glasses such as rear quarters and backlite. We are in the process of validation of finishers for windscreens which aid the OEMs to assemble the windscreen on the vehicle. These materials have a recycled content of more than 50% in mass and are expected to reduce the carbon footprint of the components by potentially as much as 20%. It is paramount that these materials do meet the same criteria in terms of functionality, durability and aesthetics as per the current materials while remaining affordable.



S: Standard Material G: Green Material

*Versus standard virgin material (Supplier source)

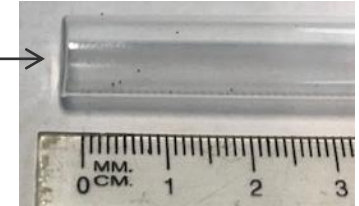


End-of-Life Glass recycling:

With regards to what is referred as post-consumer cullet (cullet generated after the end of life of the glazing/vehicle), NSG has launched various initiatives in multiple regions either independently or with the support of OEMs to find sources of cullet coming from end-of-life windscreens that can be fed in our float to produce new automotive glazing. Due to the high-quality requirements of automotive float, it is imperative that the cullet we use have undergone a very stringent check with regards to "cleanliness". Our R&D team has set up detailed specification on what makes cullet "clean" and therefore acceptable for NSG to use in our float lines to achieve the

automotive float optical quality and have no detrimental impact on our production or equipment.

This level of contamination per 10kg of cullet could cause serious manufacturing issues



Using 1 Tonne of recycled cullet reduces CO₂ footprint by 400-600kg^{*2}

^{*2} : considering cullet process/logistics. For maximum benefit with regards to reducing carbon footprint, it is therefore critical to have source of cullet as close as possible to our float.

Low-Emissivity online coated glass

In recent years, CO₂ reduction has become an even more important issue in order to comply with carbon neutrality regulations in each country. As a result, the market needs for HEV (Hybrid Electric Vehicle), PHEV (Plug-in Hybrid Electric Vehicle) and BEV (Battery Electric Vehicle) are expanding and there is a need to improve fuel and electricity consumption. The heat of the sun is transmitted to the inside of the car in the hot summer through the front door glass and the temperature in the room rises and the load on the air conditioner will increase. In order to solve this problem, NSG offers a unique coating technology which has got a high heat-shielding performance.

This eco-friendly product contributes to reducing the amount of air conditioner used even in the harsh environment of summer and increases the energy efficiency of vehicles.

It also cuts more than 99% of ultraviolet rays and can further suppress the deterioration of interior parts such as instrument panels and seats, making it an environment-friendly product. In addition, our products have one of the highest durability in the market and can be used for a long time without maintenance without the need for glass replacement.

Sustainability and products

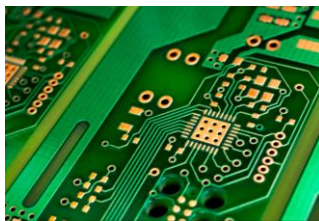
Technical Glass

Glass is a versatile high-tech material that is light, strong, fire resistant, electrically insulating and chemically resistant. In Technical Glass business, we develop unique materials supporting the evolution of customer solutions that contribute to sustainable, energy saving products across many market segments.

Examples include: high strength, high heat resistant, and high modulus glass fibers for advanced environmental performance; glass lenses for printers and for automatic optical inspection systems that facilitate the reduction of product defects; high strength thin sheet glass for advanced optical displays; glass flakes with low dielectric properties for next generation electronic components; glass lenses that enable high speed digital communications infrastructure.

GLASFLAKE®

GLASFLAKE® is scale-like fillers made from various glass compositions, and have a wide range of thicknesses from sub- μm to several μm , and particle diameters from several to μm several tens of μm . They have a wide range of applications, and their excellent acid resistance is used to extend the lifespan of offshore wind power generation paints, while their ultra-thin and small particle diameter products contribute to the lightweight, thin, and small design of engineering plastics. In addition, in order to reduce transmission loss in the context of the recent need for high-speed communication, there is a demand for components with low dielectric properties. We have also succeeded in developing products that combine low dielectric properties through the examination of glass composition.



Glass Beads

Microplastics, which are also used as ingredients in cosmetics, are a growing concern due to their impact on marine pollution. NSG has developed GLACIA DROPS™, a spherical glass product that can be used as an alternative to microplastic beads. This product, which was created using NSG's new technology, is characterized by its soft texture, despite being an inorganic material. Made from raw materials with few impurities, it is finding a wider range of uses as a cosmetic powder that is safe for the skin and the environment.



High-strength glass fiber

MAGNAVI™ was developed based on the concept of environmentally friendly product development, and it has gained a high reputation as a fiber for reinforcing plastics in a variety of applications, including aircraft, automobiles and composites or machines for industry.

In addition to its rare earth free composition and reduced energy use amount and CO₂ emissions during production etc., its superior strength and elastic modulus, as well as its high impact resistance compared to carbon fiber, enable it to contribute to the conservation of resources and energy and the reduction of CO₂ emissions through the use of thinner, lighter materials.



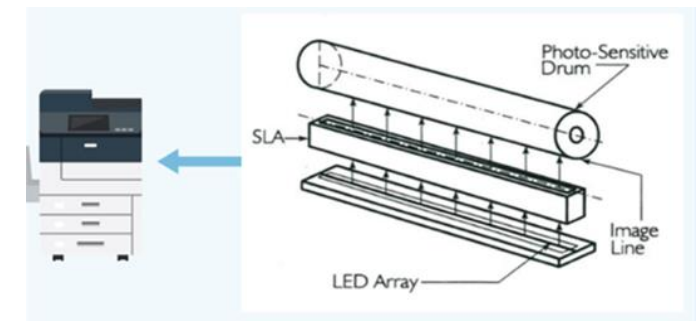
LPH (LED Print-head)

The LPH (LED Print-head) is a print head used in LED printers, and our SLA (SELFOC® Lens Array) is the only lens product in the world used in LPHs.

With LPH, the light emitted from each LED element is irradiated onto the photoreceptor drum via the SLA, enabling high-speed, high-quality printing. LED printers that use LPH have a simpler optical system, which makes them significantly smaller and lighter, and also contributes to power saving. In addition, the benefits of smaller size and lighter weight are being used to develop applications for mobile photo printers and label printers.



Photo Credit: FUJIFILM Corporation



LPH installed in LED printers

Energy

Energy Usage

We work continuously to minimize energy input into all our processes, so that the usage of glass contributes net benefit to sustainability.

Please refer to the "[NSG Group Energy Policy](#)".

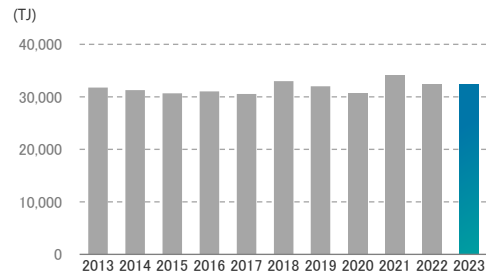


Our energy usage and carbon emission

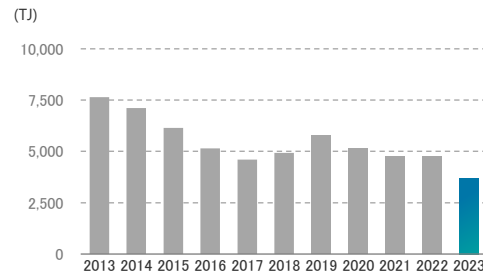
For both environmental and financial reasons, we continue to use natural gas as the fuel of choice for glass melting. Float furnaces continue to be converted from heavy fuel oil to gas. Automotive furnaces are in trend from gas to electrical heating to follow renewable electricity share increase.

Small quantities of diesel and LPG are used for space heating and back up generators. See the graphs for consumption and carbon emission in details.

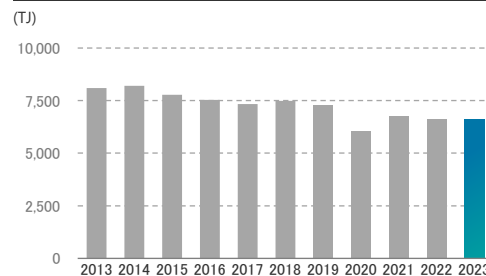
Natural Gas



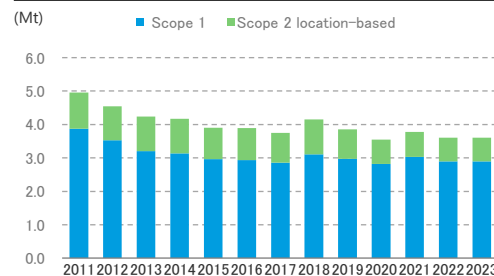
Heavy Fuel Oil



Electricity



Carbon Emission



Please refer to the [data](#)

Initiatives to reduce energy usage & carbon (CO₂e) emission

Energy & Carbon Management

All initiatives are monitored by the Heads of SBUs and Group functions at six-monthly Energy & Carbon management Committee meetings.

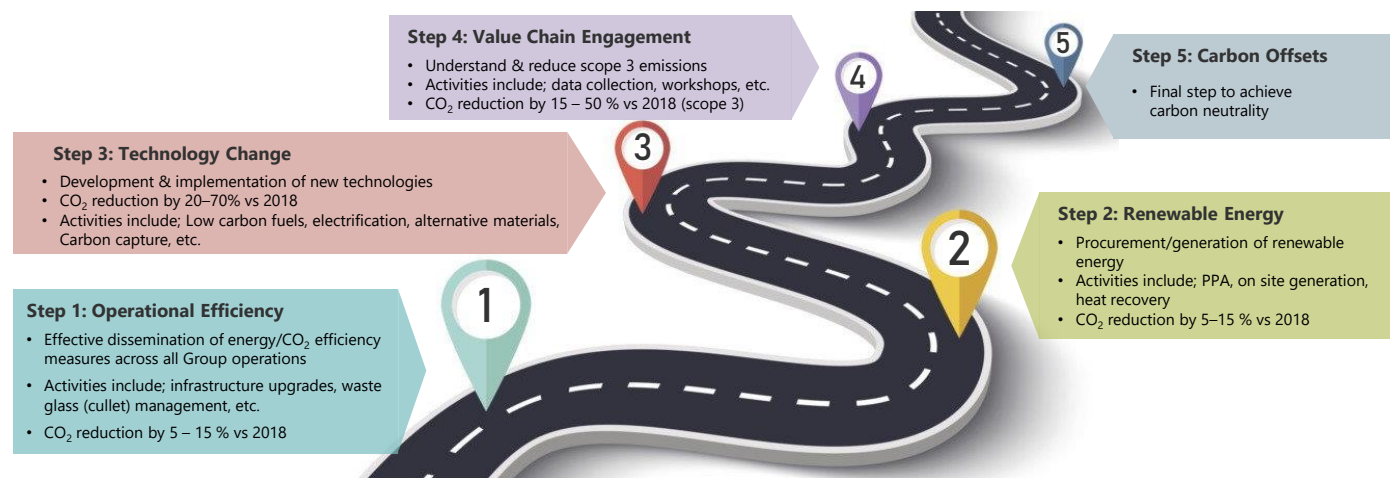
Energy & carbon management SBU committees

The energy pilot plant program was replaced during FY2022/3 with the introduction of management committees at SBU level. The role of these committees is to facilitate focused engagement across the SBU with involvement of the SBU executive team and other key central functions. This gives the opportunity to provide focused identification and dissemination of activities relevant to the SBU as well as general Group level initiatives. Alongside energy efficiency activities, the committee also coordinates progress of decarbonization roadmaps at an SBU level which are derived from regional and local plant level proposals. This 'bottom-up' approach is one of the key aspects for decarbonization target achievement with ownership of the roadmap at a local production site level.

This management approach has facilitated the development of the NSG Group decarbonization roadmap. This roadmap focuses on the implementation of five key activities to support the achievement of the mid term (2030) Science Based Target and long term (2050) carbon neutrality target. The five stages run in parallel incorporating existing activities as well as development and implementation of technologies and processes of the future. The program is detailed in the figure below.

Energy

Progress of this roadmap will be coordinated by the Energy & carbon management core multifunctional team, with management committee progress reviews on a six monthly basis. The first iteration of the roadmap focused on a 'top down' approach to identify at a Group level the opportunities and program actions necessary to implement those opportunities to achieve targets. This roadmap was further developed with the introduction of the 'bottom up' activities, leading to the development of the first iteration of the NSG Group action plan for decarbonization. Now into the third iteration of development, specific examples of these actions are included in the following sections;



Operational energy & carbon efficiency projects

The Operational Cost Saving program aims to reduce all operational costs in the areas of prime and overhead costs. One of the largest prime costs for the Group is energy.

As part of the NSG Group Transformation program, energy and carbon efficiency / cost reduction activities are classified according to the financial saving, cost and/or level of technology innovation into one of three categories:

Kaizen	Continuous improvement projects. These projects continue to be referred as operational cost saving activities(OCS)
Kaikaku	'Big Change' projects, achieving significant improvements in efficiency / cost reduction
Kakushin	'innovation' projects, which require some level of innovation as well as significant improvement in efficiency / cost reduction

To support the cost saving activities across sites, a deep analysis of all energy projects within the Transformation and 3K OCS database is regularly completed. Multiple projects were identified for rapid dissemination in FY2024/3 to deliver energy consumption, CO₂e reduction & cost savings. Each manufacturing site within the Group had at least one active 3K OCS energy project in FY2024/3. Led by Manufacturing Excellence and assisted by other Group functions, NSG Group sites identified more than 200 energy and carbon optimization opportunities, resulting in annual energy efficiency improvements in excess of 50GWh and CO₂e savings in excess of 30kt.

Major projects include; furnace fuel combustion optimization, reducing electrical requirements of motors, optimizing compressed air systems, energy sub metering, energy efficient lighting, fuel

switching, cogeneration processes, waste heat and energy recovery.

An initiative to engage in Industry 4.0 or Internet of Things (IoT) for energy management continued to be progressed during FY2024/3. This includes analytics of process data including energy metering with the goal of optimization of energy consumption & CO₂e emission. The analytics also supports the identification and development of new projects, such as identifying energy waste & management of tariffs. This project links directly to the broader aspects of digitalization of NSG operations and activities which is a Group level initiative. Several other digitalization projects for improved energy efficiency are under development across the organization, with pilot applications implemented in the UK, North America and South America.

A focus on the energy & carbon efficiency of operating furnaces when they are repaired was launched in FY2020/3 and continued to be implemented in FY2024/3. This included the restart of the first furnace repair where this minimum 5% improvement target has been introduced and the performance exceeded this target. The program continues as a key activity within the specific actions for efficiency improvements in addition to the general efficiency benefits of furnace repairs. This program has now been implemented at several furnace repairs, including 2 repairs in FY2024/3 resulting in significant improvements in efficiency expected across the full life (at least 15 years) of the furnace operation.

Energy

R&D activity

Reducing CO₂ emissions and maintaining the security of energy supply for our furnaces will remain fundamental to our continued business. Implementation of incremental technology changes will be required in the short term to minimize capital expenditure.

During FY2021/3, the original R&D decarbonization project (Project Carbon 2050) was separated into a series of individual project activities to support the delivery of the Group strategic mid term targets (RP24) and longer term Science Based Target goals. In FY2023/3, these individual projects continued with the implementation of several specific project actions to 'test' the application of various technologies in supporting delivery of the targets with viable solutions. A key project that continued within FY2023/3 was the application of Hydrogen as a low carbon alternative fuel in the float glass manufacturing processes. In August 2021, NSG Group achieved a global first with tests of the use of hydrogen at its Greengate Works in St. Helens, U.K.

The initiative is part of a project managed by HyNet, a consortium of industries in the North West of England, aimed at reducing carbon emissions from industry, homes and transport. The work is supported by £5.2m of funding from the UK government under the Industrial Fuel Switching Scheme. NSG Group are investigating whether hydrogen can be used to wholly or partly replace the natural gas and oil that are the standard fuels for the glass making industries. If all of the natural gas can be replaced with hydrogen this would reduce emissions of scope 1 CO₂e by around 80%. The float glass produced from this successful trial has an overall carbon footprint of 40% lower than standard float glass produced.

The development of Hydrogen and other alternative, low/zero carbon fuels continued from 2021 into 2023, with another global first achieved by the Group with the production of float glass utilizing a bio derived fuel oil.

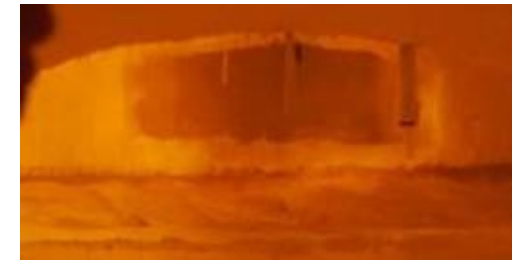
Carbon Capture - System of the small unit for Carbon Capture and storage from waste gas stream installed to float furnaces at Greengate site in Saint Helens, U.K. The system has successfully been separating CO₂ from the waste gas stream as part of our carbon capture technology trial with a 3rd party collaboration - C-Capture. This is to follow our decarbonization road map and develop other options to reduce CO₂ content in our products. The trial forms part of C-Capture's UK government funded national project, 'XLR8 CCS – Accelerating the Deployment of a Low-Cost Carbon Capture Solution for Hard-to-Abate Industries'. The project aims to demonstrate that a low-cost carbon capture solution is a reality for difficult-to-decarbonize industries in the race to net zero.



C-Capture test facility installed at Greengate site, UK



Flame appearance inside the furnace using a fuel blend of 80% natural gas and 20% Hydrogen.



Flame appearance inside the furnace using a fuel blend of 100% Hydrogen.

Energy

Management systems

We have maintained ISO 50001 certification across all operations in Germany, Italy, Finland and the Automotive engineering function. In addition, the certification has been extended to included operations in South America (Chile) with plans of further implementation in FY2024/3 across Brazil & Argentina. Investment in sub-metering hardware and software installations allows a high level of transparency in energy consumption and enables a sophisticated energy planning process with improvement activities, target setting and frequent reviews to be established. This is a key component of the strategy within FY2024/3 to link digitization and decarbonization activities.

Energy Savings Opportunity Scheme (ESOS)

All UK manufacturing sites are continuing to participate in the UK government Energy Savings Opportunity Scheme (ESOS). Currently, we have just completed phase 3, the scheme is linked to the UK government commitment to the EU Energy Directive article 8. Sites are assessed by certified external auditors with the aim of identifying viable energy saving project activities. The assessment includes verification of energy consumption data and site energy audits which result in a set of published recommendations signed off by a UK senior management representative. A number of initiatives identified within the scheme have been implemented and disseminated across other regions. Similar schemes exist in several EU and other countries either at a mandatory or voluntary level with many sites participating.

Renewable on-site energy generation and alternative fuels

In 2020 the Group published (via CDP response) a target to increase the proportion of certified renewable electricity (as purchased and/or via on-site generation) to 50% by end of 2024 vs 2018 baseline consumption proportion.

Progress towards this target was significant during FY2024/3, with 35% of the NSG Group operations electricity consumption being supplied from renewable generation. During FY2024/3, several specific project initiatives were launched. Building on the signing of a power purchase agreement (PPA) with EDP Renewables (EDPR), the world's fourth largest renewable energy producer, for the renewable electricity generated by a wind farm located in Poland.



The PPA program was extended to include activities across several regions involving multiple sites. The purchase of certified renewable generation certificates (REC's) in countries across Europe, the America's and Asia regions continues.

The purchased of REC's is a key part of the decarbonization transition activities with the expectation that over a period of the next years, the

proportion of REC's purchased will decrease and be substituted with increasing quantities of electricity purchased via PPA's.

In addition, continued investigation and investment (via internal capex or utilizing third party funding approaches) in on-site generation has been made.

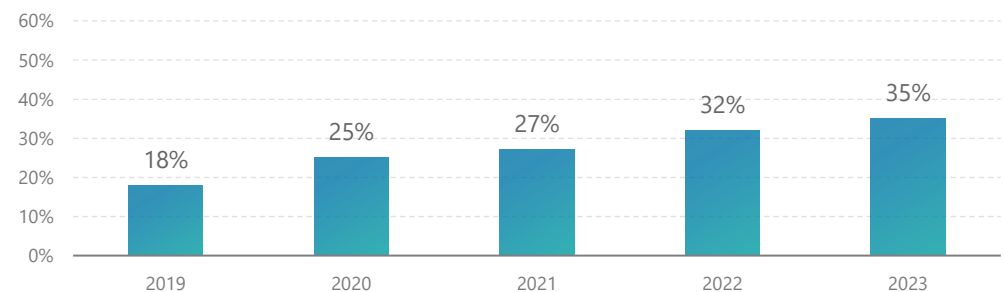
Alongside the existing on-site generation facilities at the NSG technical center in the UK (Lathom) which became operational in 2020, the Northwood technical center in Ohio (2021) and the Rossford fabrication operations facility, Ohio (2022), the Group has opened in FY2023/3 onsite generation capability in Aken (Germany) and continues to expand existing operations such as the photovoltaic panels on the roof and former car parking areas of our German Weiherhammer plant. Further on site generation projects are under evaluation in Europe, North America, Malaysia, Japan and several other locations

We continue to evaluate and utilize alternative low carbon / renewable fuel sources across the Group operations. As well as the Hydrogen and bio derived fuel trials in the UK, investigations are ongoing to identify viable sources of such fuels in other global locations. The use of such decarbonization technologies has been an integral part of the development of NSG low carbon glass solutions.



Installation of thin-film solar panels at Rossford plant

NSG Group – Renewable Electricity



Energy

Partnership with suppliers



We continue to partner with key suppliers to develop projects to reduce energy consumption in our manufacturing sites. Close collaboration with leaders in specific technologies is enabling us to implement optimum solutions to specific energy management challenges. Collaborative projects undertaken include; utilization of battery storage systems to support reduction in consumption peaks in electricity demand, addressing compressor inefficiency and installation of high efficiency motors and to make better use of waste heat generated in our glass-making processes.

Employee energy efficiency awareness

An energy management training program, designed to help the Group deliver cost savings and reduced CO₂e emissions, has continued to be rolled out globally. Launched in 2016, the program has been implemented across European, South American, Japan and South East Asia operations.

The initial program involved local site energy champions in a 'back to school' initiative that increased levels of energy awareness and supports the on-going generation of energy and carbon management project activities. The key aspect of the training is to help the delegates understand the approach to energy and carbon management, how they can identify and implement activities at their sites and encourage others to do so.

Following the successful implementation of remote training solutions developed in FY2023/3, several discrete training sessions were held to both educate new energy champions as well as providing 'refresher' training to previous attendees. This activity was supplemented with the development of various energy management auditing tools to support implementation of best practices. A specific focus during FY2024/3 has been a return to basics program to ensure continued adoption and development of the existing best practice management activities in place across the Group. To date, the training has directly involved more than 100 champions, with identification and implementation of over 500 projects. Energy savings have exceeded ₹ 150 million, and reduced CO₂e emissions by more than 10,000 tonnes.

The initiative comprises three levels of training, with level 1 involving 50 hours in all aspects of energy management. It is designed to support site energy management activities and give formal

qualifications to the delegates with the cost of the course being recovered by the delegates identifying and delivering energy cost-saving projects.

The course is organized with the support of local functional teams and was led by David Cast, Climate Change Director, NSG Group and Zeeshan Qamar, Climate Change Technical manager. In November 2023, they visited Chile, Argentina and Brazil to conduct site visit with the site teams and to provide energy management training to the "energy champions".

The energy management training and workshops will be the focus in FY2025/3 too as they look to carry these out in different regions. This will extend the reach even further of the training activity to develop the necessary skills across the organization in support of the decarbonization and energy efficiency goals.



Participants for the Energy cost saving project in Brazil (left) and Argentina (right)

Following successful completion of level 1, delegates are encouraged, where appropriate to their role, to continue energy management training with external organizations leading to level 2 and level 3 qualifications. Several delegates across the NSG Group have achieved the level 3 qualification.

Project examples that have been implemented so far include:

LED lighting replacement and controls	Staff awareness campaigns including 'shut-off' activity and inappropriate energy use
Replacement of motors & drives with variable speed devices	
Optimizing combustion set up in furnaces and boilers	'Back to basics' program for energy management which includes utilization of energy 'mini audits' in daily routines (part of 5S activities)
Reducing compressed air leakages and optimizing compressed air generation efficiency	

Since the start of 2024, workshops have been held with all of North America and European teams (AG and OE/AGR) to go through their 3K OCS projects and any carbon impact associated with this. The workshop helped improve the understanding on why we need the carbon impact for each 3K OCS project and each participant reviewed all their projects once again. The input process of 3K OCS system has also been changed.

Energy

Employee Engagement Program – collaboration with JUMP

In 2021 we launched an energy & carbon awareness program for employees based at the NSG European technical center. This program utilizes a 3rd party software platform (JUMP) called the net zero challenge (NZC). The NZC offers simple ways in which people can be more sustainable, no matter where they are on their sustainability journey. It links activities in the workplace and at home, proving practical ideas and suggestions. Progress is measured against targets with participation encouraged by reward and recognition programs. In 2022 the program was extended across all UK operations. Through implementation of these simple measures, UK employees have delivered in excess of 17 tonnes of CO₂e reduction. While this is a very small fraction of the total UK emissions of NSG Group operations, the increase in awareness as a result of participating in the program is very significant and supporting the energy & carbon objectives of the Group.



Net Zero Challenge



Your first winner is...

We've completed our first month of the Net Zero Challenge, which means it's time for our very first voucher winner! Our top points earner was **Helen M** from **Trees for Cities** and for their incredible efforts they've received a **£20 voucher**. Want to be a winner next time? Earn as many Green Points as you can in March - we only look at points earned each month, not overall, so that no matter when you join you've got the same chance to win.

NEW: Track Your Impact!

The Net Zero Challenge is all about reducing our carbon emissions, so we've made it easier for you to track the impact of your actions. Our **Impact Dashboard** shows you the **CO₂ emissions** your actions are avoiding, as well as other impacts like kilograms of waste or litres of water. You've already helped the Net Zero Challenge clock up **1,280kg of CO₂ saved** through your actions! [Check out the dashboard now](#)



Heat Recovery In Poland Operations

A four step program has been completed at the Automotive OE operation in Chmielow, Poland to recover and utilize waste heat generated at various stages in the manufacturing process. Stage 1 and 2 involved the capture and recirculation of heat generated from air compressors on the site. Stage 3 focused on capture and utilization of waste heat generated from the air handling units providing conditioned air to the clean rooms for pre-lamination stage of the process. Step 4 started in FY2022/3 and continuing during FY2023/3 includes the installation of heat recovery units on the glass bending furnaces and utilizing this heat for generation of hot water for plant space heating. Total energy savings delivered by the project will be in excess of 2.5 GWh/yr and in excess of 1800 tonnes of CO₂ avoided for generation of thermal energy.

Over the past decade, the NSG Group has worked on improving its energy efficiency through energy management projects such as lighting upgrades, utilization of waste heat and innovative manufacturing equipment. This has created a platform in which the focus can shift from the reduction of energy consumption, to the integration of renewable energy projects to further improve the sustainability of its energy supply. Following a successful lighting installation project at our Gelsenkirchen site, we have seen significant advantages with the new LED lighting system as well as the savings it has generated for the business. Following this, Poland AG and OE sites were completing a wider project to exchange lights to LED for internal and external areas with reduction of energy, CO₂ reduction and with an additional reduction in maintenance cost. This kind of approach is disseminated worldwide.



Energy

Solar Panel

It is increasingly recognized that a move from fossil fuel is essential as supplies are finite and global warming is a reality. Solar energy panels offer alternative solutions for a range of energy requirements, from small scale domestic applications to large scale solar power stations, from cloudy northern rooftops to hot sunny deserts. Glass is an integral and important element of these solar panels. Our wide range of high-quality products are used in the three leading solar technologies aimed at converting solar energy into electricity: thin film photovoltaics, crystalline silicon photovoltaics and concentrated solar power applications. In addition to the generation of electricity, our glass products are also used in solar applications that generate hot water.

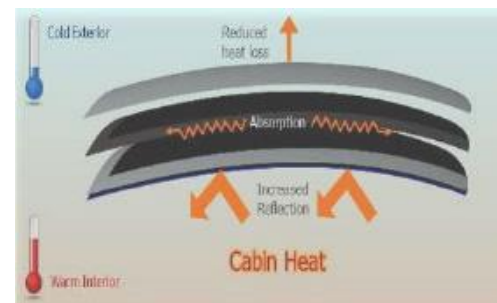
Aken Plant solar farm



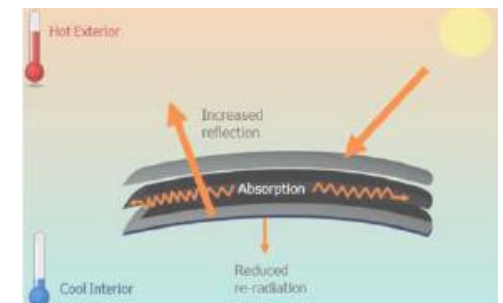
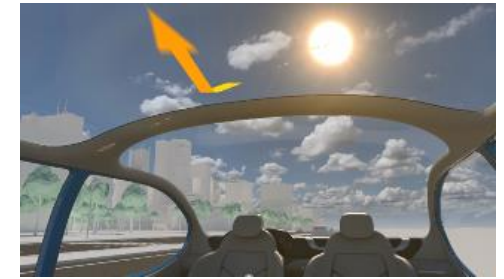
Solar Control - Rooflight (RL) of Low Emissivity (LE) online coated glass

NSG has launched its first high performance solar control rooflight that provides occupant benefits in both summer and winter conditions. A low emissivity coating laminated with a special solar absorbing interlayer has allowed the customer to remove the internal blind system on the vehicle - providing an energy saving coupled to weight and cost saving benefits. There is further development of this environmentally friendly product as PDLC (Polymer Dispersed Liquid Crystal) glass that is adding to the Low Emissivity glass additional possibility to change Roof light's transparency by electronic system.

The NSG Group will promote the introduction of alternative energy sources such as hydrogen in the manufacturing process, and will actively promote efforts to decarbonize by providing products for the renewable energy market and developing products that save energy.



Winter → Reflects heat inside the vehicle and suppresses dissipation of heat outside the vehicle.



Summer → Inhibits the release of heat absorbed by the glass into the vehicle.

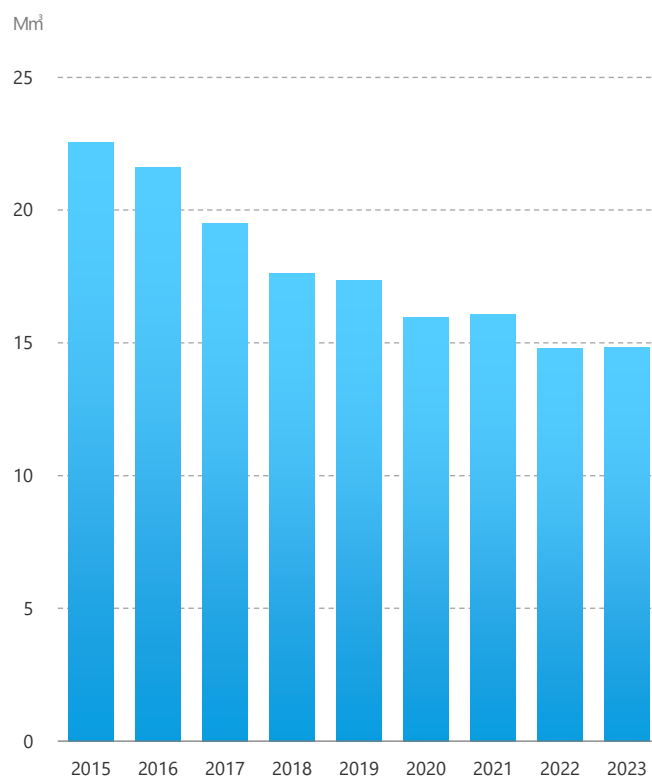
Water

Water utilization and Water management

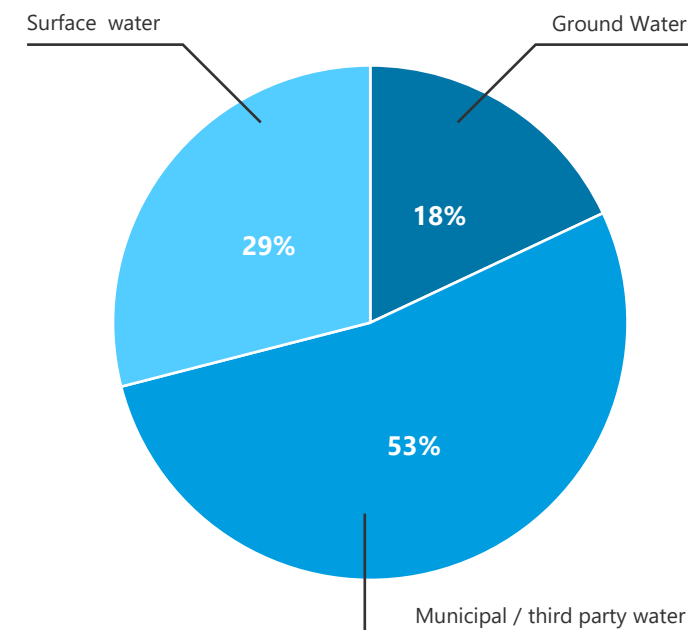
In glassmaking, most water is used for cooling, and most of our plants operate with closed loop systems and so only require top up. Water is also used for washing glass in plants but there the need is for very high purity, so water is treated and then re-circulated. We seek to minimize our water consumption by working with suppliers to recycle water and to install advanced water treatment facilities. Processes are managed by Manufacturing Excellence's standardization procedures (e.g. turn off washer sprays when not needed, use optimal sized nozzles, install water catchers, implement controls to prevent overflows and maintain to prevent leaks, etc.). This not only reduces the withdrawal of water itself but also the chemicals used in the treatment of the water. Across the Group, water consumption can vary considerably according to process and product demands as well as water quality. Approximately 2.6m³ are required to manufacture one ton of float glass and approximately 0.12 cubic meters are required to process each square meter of automotive product.

We withdrew a total of 14.8 million cubic meters of water in 2023. This is about the same quantity as in 2022. Please refer to the "[NSG Group Water Policy](#)".

NSG Group total water withdrawal 2015-2023



NSG Group Water withdrawal by source 2023 (m³)

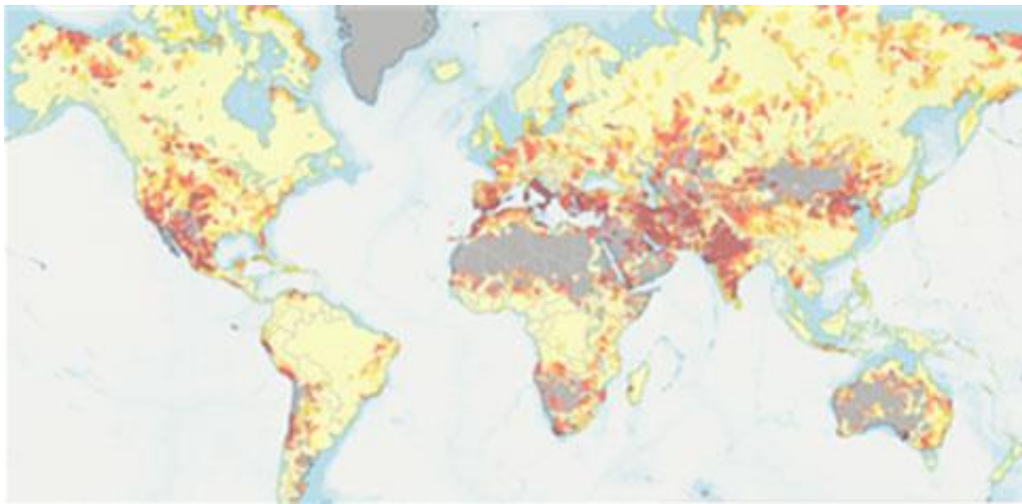


Water

Water risks

We do not have any current stakeholder concerns regarding water scarcity or wastewater quality. On the other extreme of water risks, flood planning and prevention strategies have been applied where indicated. Water risks do not register as significant in the NSG Group risk assessment process; however, we will continue to risk assess all facilities. The NSG Group Sustainability Committee reviews risk and performance and discusses related activities on water management. The NSG Group has implemented an extra Water Policy in 2020 to ensure a clear statement of NSG Group's approach to water stewardship and in order to address water quality challenges and the risks of water scarcity in support of the Group Sustainability and Environmental Policies.

In 2019 the NSG Group implemented a new and more sophisticated Environmental Reporting and Analysis database. All sites are reporting their specific information and water data into this central database for further aggregation, analysis and monitoring on corporate and site level. Our 2022 data reporting and reviews highlights that 9 NSG sites are located in water stressed areas in accordance with the global Aqueduct Water Risk Atlas. The water withdrawal at those sites represents 14% of the total in 2022. Those sites are subject to prioritized water management reviews and improvement activities.



Water stress map - source: Aqueduct Water Risk Atlas

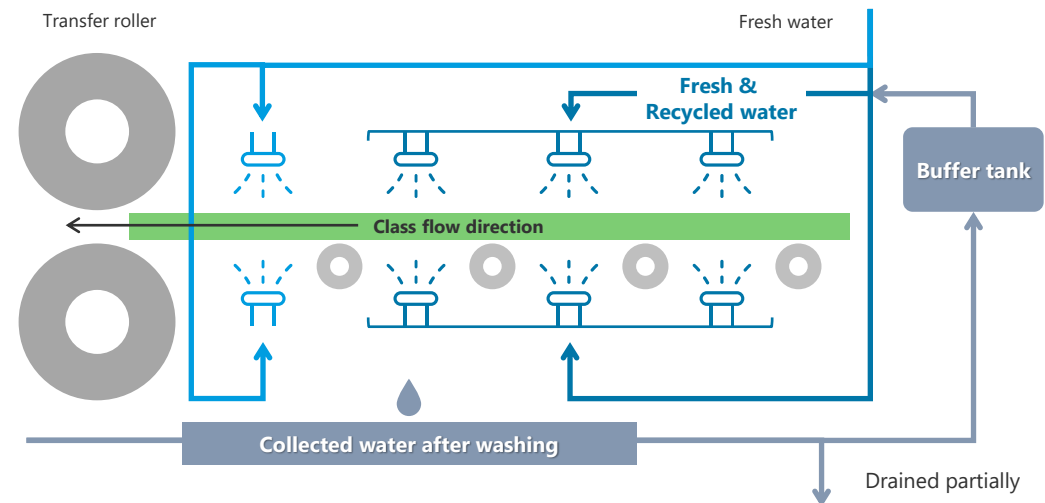
Water saving Projects

Amongst other good water saving projects, the water project at the San Salvo plant in Italy is extremely successful. The San Salvo plant is located in a potentially water stressed area at the east coast in southern Italy. Most of the utilized water for equipment cooling, glass washing and steam generation comes from a nearby river - with potential water scarcity in hot summer periods.

The recent improvement project had 3 steps: better water utilization, reuse optimization and the use of rainwater. All 3 steps lead to an overall reduction of water extraction from the river by 69% in 2022 versus the project baseline of 2019. The saved water from the river is now used by the local water supplier to produce drinking water for the local Community.

This project did win the Environmental Award of the NSG Group EHS Award in 2022.

Another significant water saving project got implemented at a Float plant at Hanoi in Vietnam. This includes a system to collect rainwater plus water recycling at a glass washing machine - resulting in a ~17% reduction of the water demand at this plant.



Society Shift and Innovation R&D Strategy



Executive Officer Chief Technology Officer

Mike Greenall

"Shift the Phase" Background

NSG group has announced our new MTP "2030 Vision : Shift the phase". The goal is "to shift our company's phase and become vital in advancing a sustainable society".

We set the four commitments as below;

We commit to creating value that realizes a sustainable society for all stakeholders and with stakeholders.

We commit to developing and providing glass and its related technologies and services that play a crucial role in our customers' solutions.

We commit to deeply understanding our customers' potential needs and delivering solutions that are suitable for them by leveraging both tangible and intangible assets.

We commit to continuing our investment in our people, taking pride in a global, diverse team passionate about glass and brimming with talent

And we will achieve the goal including financial targets, focussing on the pillars of four "D"s as follows;

Business Development ----- to strengthen new product and business development efforts

Decarbonization ----- as part of our contribution to societal decarbonization

Digital Transformation ----- through high-value operations utilizing digital technologies to their full extent

Diverse Talent ----- in order to realize a truly diverse and inclusive team that brings about the phase shift we need

R&D Policy

"Society Shift and Innovation" is already one of the NSG group's materiality, and R&D has a key role to play also in the four "D"s above.

NSG group has a long and successful record of developing and exploiting core technologies including areas of distinct competitive advantage such as float glass, coatings, glass fibers and flakes and automotive glazing fabrication.

We are working in partnership with others to develop basic science and to enable us to investigate emerging technologies relevant to our core competencies. The breadth of involvement

ranges from long term partnerships with leading Universities in Japan, UK, USA, and Germany, to facilitating start-up companies by offering access to NSG facilities.

The businesses play active roles in the prioritization and planning of the project portfolio at a regional and global SBU level. In addition, executive reviews allow members of the management committee to monitor and guide R&D contributions to the group.

Society Shift and Innovation R&D Strategy

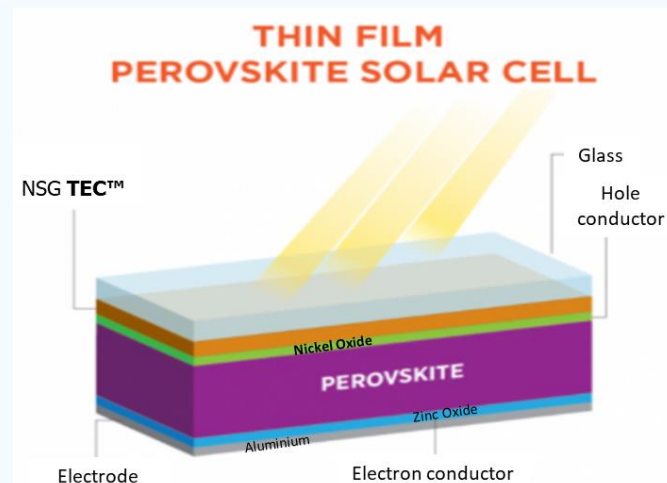
Business Development

We will enhance our business creation capabilities by continuing to invest in R&D and fostering the skills of our personnel in business development within the glass and related areas. We identify areas where new value is demanded and create new solutions together with customers. We develop new, valuable technologies and services while taking pride in our history of creating world-first technologies and expertise. In the following section, there are some examples of current developments.

Architectural Glass Business

NSG group is already very active in the Solar PV markets, providing our market leading transparent conductive oxide coated glass to established producers of thin film photovoltaic devices. These coatings are continuously evolving as we optimize them to give further efficiency gains for our customers.

The third generation photovoltaic technologies such as perovskite are developing rapidly. We are well placed to transfer the lessons learned for transparent conductive oxide coating to these exciting new markets. Over the last year we have provided many samples to companies working in this field. Feedback has been positive, and we will continue to ensure that as many developers as possible have access to our products to use in their developments.



Automotive Glass Business

An emerging trend in Automotive design is the increase in the adoption of large area rooflights on battery electric vehicles. A desire to reduce weight and increase headroom leads to the removal of the sunshade, and this in turn means that the glazing must act as the sunshade. In response to this, NSG group will shortly begin deliveries of laminates whose interlayer contains liquid crystal particles dispersed in a polymeric gel (so-called PDLC) that also incorporate our proprietary solar control and low emissivity coatings.

The value associated with such glazing has progressed a long way from the tea tray style tempered glass rooflights of the past. Vehicle makers constantly strive to improve the safety of their products and a recent move, prompted by legislation, has been

to improve the protection offered to pedestrians and cyclists who may be struck by a moving vehicle.

We have been working closely with several car makers to understand how we can modify the properties of our windscreens, to cushion any such collision, while retaining the strength needed for durability in service.

Variable transmission glass
experience mock-up exhibit at
JAPAN MOBILITY SHOW 2023



Technical Glass Business

In Technical Glass business (Creative Technology business), we will create new revenue pillars that can move the market by anticipating market needs and creating businesses (brands) through the development of strong technologies. We are currently working on the commercialization of new technologies and developing many new products.

For example, from the perspective of future decarbonization and environmental contribution, we are working on the development of high-strength, high-elasticity glass fiber (MAGNAVI™) that contributes to the need for lighter and stronger materials, and environmentally friendly, high-performance recycled fiber (BASHFIBER®) that makes effective use of coal ash generated in power generation. We have also Super Low Reflective Coating that achieves high image quality for camera modules that are essential for FA (Factory Automation) and automated driving, and low-dielectric glass materials (glass flakes,

etc.) that reduce transmission loss and energy loss in the transmission of even higher volumes of information at higher speeds.

Some of these products have been adopted by our customers and are now in mass production. We will continue to develop new products that help to solve social issues.



(Left: Without Super-Low Reflective Coating / Right: With Super-Low Reflective Coating)

Society Shift and Innovation R&D Strategy

Decarbonization

An important focus of R&D within our businesses is to research and develop technologies to reduce the energy consumption and carbon emissions associated with glassmaking. We are particularly conscious that we need solutions that achieve real reductions when considering scope 1, 2 and 3 emissions. A significant part of the overall R&D program is dedicated to this theme. We are funding research at leading universities. We are also leveraging the input of technology partners. The challenge to reduce carbon emissions is shared with other traditional industries such as steel, cement, and glass container manufacturers. NSG group is engaged in several cross sector projects, sharing experience and resources.

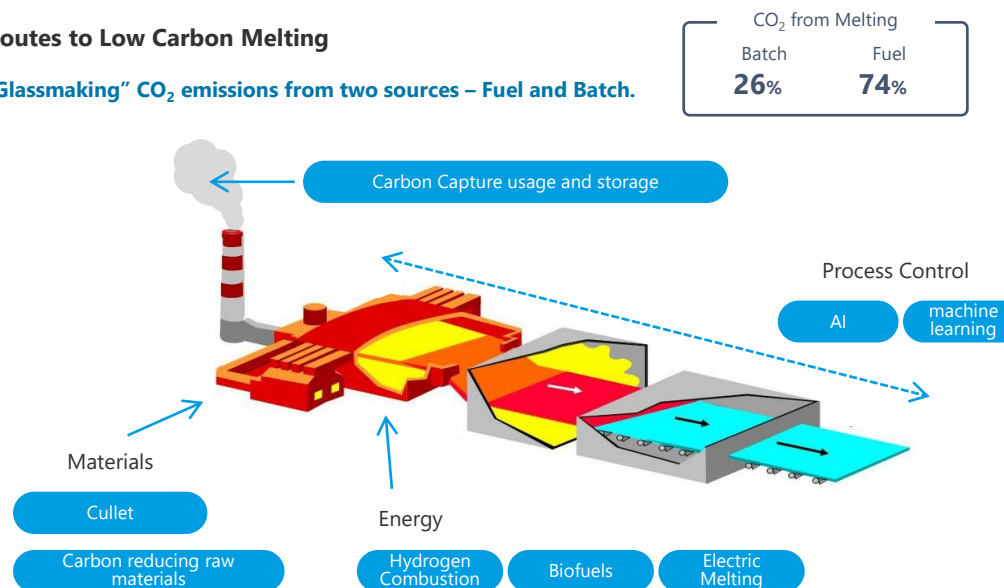
Over the last four years we have demonstrated the use of alternative fuels, alternative raw materials and continue to develop electrification of our furnaces.

A small-scale carbon capture plant has been successfully deployed on one of our float lines in UK first in the European flat glass industry, and we will report the outcome this year.



Routes to Low Carbon Melting

"Glassmaking" CO₂ emissions from two sources – Fuel and Batch.



Partnerships

Universities

Steel manufacturers

Cement manufacturers

Glass container manufacturers

Supporters



Using the technologies developed to date, a low carbon glass product, branded Pilkington **Mirai™** is now available in the market.

The photo below shows a new development in the UK. It's our first Pilkington **Mirai™** project in the UK, and from what we can see, it is the UK's first low carbon glass project. There is about 4,000 m² of glass on the project and it uses Pilkington **Mirai Suncool™** 70/35.

Sustainability is at the heart of our R&D.

NSG's product lines continue to contribute to end users' reduced energy consumption, as mentioned above in the Automotive roof light case and also the continued evolution of our architectural coated product lines tailored to meet the regionally diverse needs of our customers.



(Watford London)

Society Shift and Innovation R&D Strategy

Digital Transformation

R&D's Engineers and scientists, with their deep understanding of the processes and materials, are rapidly adopting the latest digital techniques in fields such as materials discovery and advanced process control using AI. We have partnered with leading Universities to enable us to make objective decisions about what and where and when to introduce these new techniques in order to provide the best return for the Group. Far from being rebranding of software applications under a new digital banner the various projects around the Group are using custom algorithms developed specifically for our manufacturing process.

In automotive, NSG group continues to supply customers with digital design and validation of on-glass antennae, significantly shortening development time.

And work continues developing digital twins of our manufacturing processes and improving our simulation capabilities to shorten development time.



Diverse Talent

NSG's Group R&D function is intrinsically diverse. Spread over three continents and employing science and engineering graduates from over 15 nations we start with a powerful mixture of skills and cultures.

We support local schools to encourage children to select careers in STEM (Science, Technology, Engineering, Mathematics), and give university students internship opportunities.



Intellectual Property Policy

The Group recognizes the importance of Intellectual Property (IP) in pursuing its business objectives and maintaining a competitive edge in its technical areas of expertise.

The Intellectual Property team works closely with R&D and the SBUs to align our patent strategy with our business and R&D strategies. They actively manage the Group's IP portfolio paying particular attention to patents which are closely connected with our core and strategic businesses.

Intellectual Property Rights for product developments and process technology developments are secured, maintained, and vigorously enforced.

The Group continuously monitors Third Party IP in its business field. Where appropriate, the Group will oppose the grant of such IP and will vigorously defend itself against unfounded allegations of IP infringement.

Going forward, we try to improve patent quality, and obtain intellectual property rights that will better serve the interest of businesses.

Safe and High Quality Products and Services

Our Aspiration

“Delivering safe and high quality products and services, which add value for our customers. Reducing continuously direct and indirect quality cost through a structured “Right First Time” approach in all stages of the product cycle, supported by full use of digital tools, analytic methods and a high level of automation.”

This is our vision for the delivery of safe and high-quality products and services as part of the new medium-term plan.

Our supporting programs focus on three key areas:

Consistent Customer Satisfaction
Right First Time Product and Service Introduction
Operational Excellence

Enhance Operational Excellence

- Manufacturing Excellence
- W&L Excellence
- Suppliers management



Ensure Customers are consistently Satisfied

- Prevent Quality Incident
- 3 Lines of defense
- Pass Only Good Glass



Be Right First Time in new products introduction

- Enhance Capability
- Safe Launch
- Change Management

Satisfied Customers choose NSG as a **Trusted Partner to develop New, VA, Innovative Products and Services**

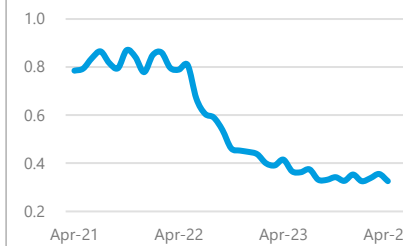


Consistent Customer Satisfaction

As a foundation for achieving consistent customer satisfaction and as the 1st Line of defense against our product quality risk NSG Group operates with management systems certified according to ISO9001: 2015 and IATF 16949 in all Strategic Business Units.

Our Manufacturing Excellence team provides a 2nd Line of defense with additional monitoring and creation of Group wide standards in key areas of risk. NSG Group Internal Audit team is the 3rd Line of defense focusing on risk-based audits of Group quality standards alongside a range of external audit activity.

NSG QIR Trend



*A measure of the occurrence of quality incidents affecting external customers with financial impact > 0.01 Oku as a ratio of sales

The Group has been monitoring the quality incident rate (QIR*) since FY2022/3 as an indicator of customer satisfaction, and in the new medium-term management plan, this QIR has been set as a KPI for the Group's materiality regarding quality. We aim to achieve zero major quality spikes (numbers) by FY2027/3.

During 2023 there has been a continued reduction in the QIR reflecting the positive impact of these program. Examples of excellent performance include the Solar business unit with zero quality incidents during the year.

The importance of a strong quality culture is emphasized at all levels of the organization. The theme for Quality Day 2024 was “Building a Quality Culture Together” with sites in all regions focused on engaging employees with fun team work activities alongside important discussions including the risk of quality related fraud. The day was also a focal point for a number of Quality Kaizen competitions.

GENBA walk activities focusing on quality



Discussion of ethical dilemmas in terms of quality



Safe and High Quality Products and Services

Right First Time

The NSG key initiative to drive quality improvement is “Pass Only Good Glass” (POGG). The goal of the Pass Only Good Glass program is to improve quality and yield performance by stopping and preventing defects at source. This protects our customers and also allows us to focus on internal cost reduction. The Pass Only Good Glass program utilizes a toolbox of quality improvement methods within a structured approach working across the whole production environment.



Integrating learning from new product industrialization into NSG Company Knowledge is one of the supporting processes behind Right First Time with recent best practice examples including supply for the Toyota Alphard and Vellfire models in the Automotive SBU, involving a complex set of glazings with a large HUD (Head Up Display) and laminated encapsulation for the front quarter lite.

The Group also continues to work on inspection for key product areas such as windscreens with Augmented Reality Head Up Displays (AR-HUD). AR-HUD images are larger than Conventional HUD (C-HUD) images, appear further away from the driver and include content which must accurately overlay & move with the scene. Recently, R&D and Automotive Engineering have been working together to develop a lower cost approach to inspection which has now

been accepted by several customers, and has reduced the Capex required for roll-out of inspection equipment for AR-HUD.

Operational Excellence

Our global Manufacturing Excellence focus drives improvement in our operations and the products and services we supply, guided by identification of the risks within our internal and external environment. ME360 is the NSG standard program to improve operations towards excellence. Sites complete a regular self-assessment against the ME360 criteria and develop a Manufacturing Excellence Improvement Plan (MEIP) based on their needs.

In order to support sites and individuals in their journey to Manufacturing Excellence, a wide range of in person manufacturing training is provided at Group level and supported by regional training schemes and a program of virtual webinar sessions.

In 2024 more than 300 individuals from Manufacturing attended in person training and are now tasked with implementing their knowledge and sharing learning in their local operations.

The company Black Belt program has also been enriched to include additional material on Artificial Intelligence, Machine Learning and Deep Learning which will support collaboration on digitalization projects across a range of functions and locations.



Program of Global Training Sessions 2024

Plant Leadership	Lean Manufacturing	Process Improvement Six Sigma	Glass Processing Training			
			Float Glass Manufacture	Automotive Laminating	Automotive Toughening	Automotive Tertiary

Suppliers

Expectations of Suppliers to NSG Group

NSG Group has two levels of hierarchy regarding expectations of suppliers. The Supplier Code of Conduct sets out the minimum standards and behaviors we expect from our suppliers of Goods & Services in areas of ESG. We expect all new suppliers and existing contracted suppliers to have signed agreement to the Code.

Launched in September 2023 the Supply Chain Charter was developed in line with ISO 20400 methodology to enhance and accelerate actions beyond the Code of Conduct to deliver the Group's sustainability Objectives. The Charter clearly outlines NSG Group's current and future ambitions in regard to eight selected key sustainability impact areas in our supply chain. We want to work with our diverse global suppliers to make a positive impact for our customers, investors, employees and the communities we work within. To become a supply partner supplier to NSG we expect you to work with us for continuous improvement.



Supplier engagement in 2023.

Our supply partners are critical to the success of NSG Group. They help us to be competitive not only in terms of cost but also in other critical aspects such as quality, supply chain resilience, sustainability, innovation, risk mitigation, ethics and diversity. The importance of suppliers to our success is enshrined in our Procurement mission statement "Leveraging our Supply Chains, Improving our World". We seek to leverage the full capability of our entire supply chain for the benefit not only of NSG but all stakeholders including our suppliers, our customers, our investors, our employees and the communities in which we operate. We seek to expand business with supply partners who share our core values and beliefs. Contractual arrangements with suppliers, while important, must be underpinned by a strong ethical foundation based on conducting business in harmony with people and planet, supporting both to flourish and thrive.

In FY2024/3 NSG Group launched its Sustainable Supply Chain Charter. This Charter sets out the eight areas that we have identified as most critical in terms of environmental and social impact:



This Charter can be seen as a "North Star" to help our supply partners navigate their way towards meaningful actions and achievements on sustainability. We expect suppliers to embrace the principles outlined in this Charter and meet its requirements. Suppliers who do so will be well positioned to develop further business opportunities with NSG. FY2024/3 was focused on the launch of the Charter and initial communications with suppliers. In FY2025/3 we will move to formal acceptance of the Charter by suppliers and the next level of dialog on which of the eight areas identified above are most relevant for them. We will work together with suppliers to identify concrete actions based on each supplier's profile to prioritize the areas with the most significant impact for their individual business. NSG also supports suppliers with access to training resources from the [Supply Chain Sustainability School](#).

Suppliers

Decarbonization

For over a decade NSG Group has committed to energy efficiency programs globally. Since 2021 Procurement has focused on Scope 3 emissions and engaged with key suppliers to better understand supply chain CO₂ and to identify and share best practice with partners. NSG Group is committed through SBTi to a 30% reduction in Scope 3 by 2030. Details of Scope 3 emissions in 2023 are shown in the chart below.

Working within key material categories with supply partners NSG Group has undertaken a number of initiatives. For example, raw materials, which account for around 15% of the Group's total CO₂ emissions, we have worked with key raw material suppliers to identify low-carbon raw materials, successfully tested in our South American Float Trials in FY2023/3 have been reconfirmed in FY2024/3 with an extended test period. Together with process optimization the initial CO₂ reduction is further improved by a 50% volume reduction to the low iron batch additive. CO₂ reduction will be further enhanced by transport savings driven by lower volumes. Other ongoing projects related to Soda Ash show positive early test results reducing CO₂.

Category	CY2023 (tonnes) Certified by 3rd party verification
1. Purchased Goods & Services	1,535,306
2. Capital goods	59,480
3. Fuel & Energy related materials	500,966
4. Upstream transportation & distribution	55,640
5. Waste Generated in Operations	1,217
6. Business Travel	4,062
7. Employee Commuting	10,973
8. Upstream leased assets	-
9. Downstream transportation & distribution	260,408
10. Processing of sold products	553,138
11. Use of sold products	-
12. End of life treatment of sold products	11,070
13. Downstream leased assets	-
14. Franchises	-
15. Investments	243,000
Total all 15 categories	3,235,260

Sustainable supply chain

Supplier development

The NSG Group monitors its suppliers' ESG rating indicators (KPIs) through EcoVadis (an external organization that assesses supply chain ESG performance) to continuously improve the sustainability of its supply chain. The EcoVadis rating coverage of our key suppliers (based on weighted average purchase value) has steadily increased over the past three years, as shown in Figure 1: Achieved 65.3% spend coverage exceeding FY2024/3 MTP target of 65% in FY2024/3, we continued the focus on suppliers with low EcoVadis scores and worked towards improving their scores. As shown in Figure 2, the overall average score increased was maintained at target level of 60. The number of low-scoring suppliers increased but at the same time we achieved our largest year-on-year increase in suppliers completing the EcoVadis assessment with 1,013 suppliers (+50%).

Fig1 3 Year Performance against Rivial Plan 24 Valid Scorecard Spend %

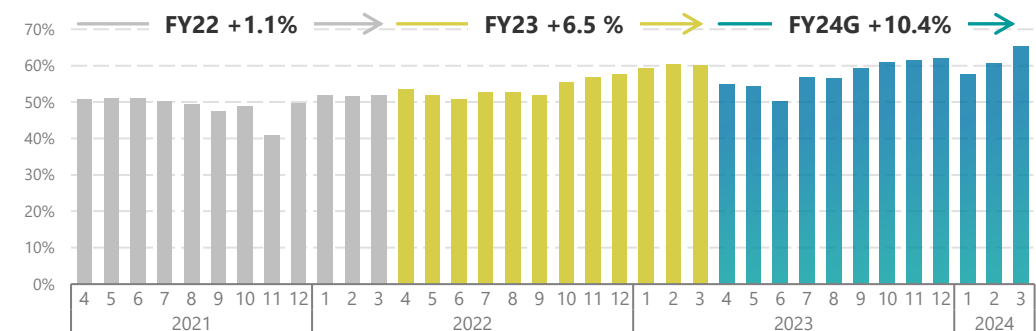
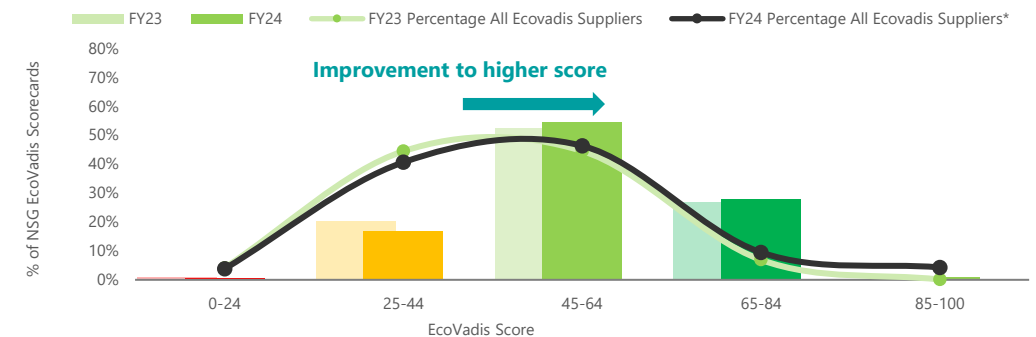
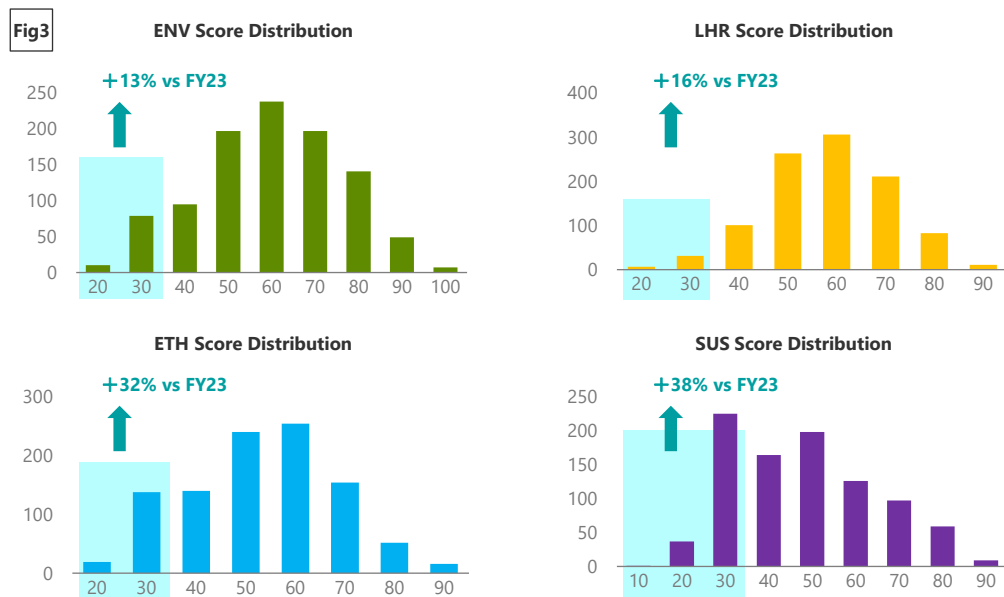


Fig2 FY24 - EcoVadis Score Distribution



Suppliers

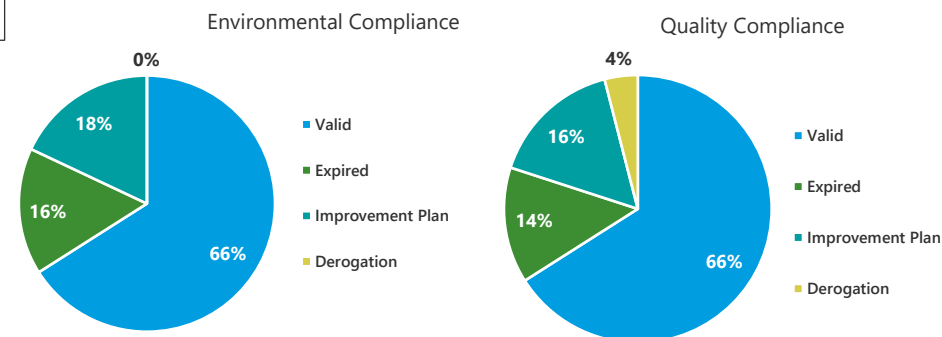
Figure 3 shows the scores by category for the key EcoVadis themes: environment (ENV), labor and human rights (LHR), ethics (ETH) and sustainable sourcing (SUS). EcoVadis spend coverage together with score is a KPI in our 1st Sustainability Linked Loan in UK and FY2024/3 performance has been externally verified by recognized UK based auditors.



Supplier Quality & Environmental Compliance

Special attention is paid to suppliers with a potentially significant impact on the environment (HEI: High Environmental Impact). Suppliers in the HEI categories such as wood packaging, chemicals, etc. are required to sign and comply with a Supplier Code of Conduct, obtain ISO 14001 or equivalent national environmental certification and/or EcoVadis assessment. Also, for wood, paper and corrugated packaging materials we strive to minimize the negative environmental impact of these suppliers by requiring them to obtain Chain of Custody (CoC) certification from the Forest Stewardship Council (FSC) or PEFC forest certification programs for their raw material suppliers, for example. Supplier compliance status in terms of environmental aspects, such as ISO 14001, forest certification and EcoVadis scores, and in terms of quality, such as IATF 16949 and ISO 9001, is shown in Figure 4.

Fig4



Strategic approach to sustainable supply chains

In 2022 NSG established a new Procurement mission fully aligned with the Group's mission "Changing our Surroundings, Improving our World". The Procurement mission "Leveraging our Supply Chains, Improving our World" recognizes the vital contribution that our supply partners can make to the planet and society and also to NSG's own goals in the area of Sustainability. This section of our Integrated Report will set out NSG's ambitions in this area and provide some examples of the initiatives we are working on in partnership with our suppliers.

We will;

- Align the supply chain sustainability strategy with the NSG Group's sustainability objectives
- Ensure that NSG is recognized as a leader in sustainability in the supply chain
- Assist in attracting and retaining diverse talent
- Follow international standard, ISO 20400: Principles of sustainable procurement.

As a first step we have published in September 2023 a Sustainable Supply Chain Charter outlining our long-term aspirations and commitments as part of establishing and developing a fully sustainable Supply Chain. The Supply Chain Charter will also list the corresponding commitments expected of our suppliers and the KPIs we will use to measure their progress.

The Supply Chain Charter identified the following eight key sustainability impact themes as having the greatest impact on the supply chain.



Suppliers

Sustainability prioritization heat maps

We want to improve the sustainability performance of our supply chain in eight priority areas, however, all our suppliers are impacting social and environmental values differently, depending on materials or goods they supply, their operational activities, and their geographical location.

To help us prioritize our Charter efforts most effectively, we created risk prioritization heat maps embedded in The Charter.

The heat maps will give us confidence that we are focusing our efforts for the greatest positive impact on our shared goals.



A red cell indicates that the category of spend in that priority area is a high priority for action in this Charter.



An amber cell indicates that it is a medium priority.



A green cell indicates that the category of spend in that priority area is a low priority.



A blue cell indicates that in that category of spend there are opportunities for improvement related to that priority area inspired by good practices and supply base.

Material category	Greenhouse gas emissions	Environmental protection	Labor and Human Rights	Waste	Water	Transparency	Diversity, Equity & Inclusion	Communities
Auto Hardware Materials - Chemical								
Auto Hardware Materials - Electrical								
Auto Hardware Materials - Metallic								
Electronic Manufacturing Services								
Technical Glass Finished and Semi-Finished Products								
Technical Glass Raw Materials								
Technical Glass Process Consumables								
AGR products for re-sale								
Energy & Utilities								
Glass Surface Mirroring Materials								
Glass Surface Printing Materials								
Interlayer Materials								
Batch Materials								
Glass Surface Coating Materials								
Industrial Gases								
Glass								
IGU Materials								
Site Materials/Equipment								
Process Consumables								
Packaging								
Outsourced Manufacturing								
Interleavant Powders								
Spare Parts and Maintenance Materials								
Construction Contract								
Refractories								
H&S Supplies								

Suppliers

ESG targets and training

NSG's Procurement Team, from Executive Directors through all levels, have S.M.A.R.T objectives (Specific, Measurable, Achievable, Realistic, Timely) related to the sustainability activities described above. They are also required to attend various training courses on ESG items such as NSG Code of Ethics, Anti-Bribery and Anti-Corruption (ABAC), Competition Compliance and, more recently, Fraud and IS Security. In addition, with the support of our long-term partner EcoVadis, we are conducting formal ESG awareness training sessions, including practical assistance on platform functions.

For each theme, we have set four key elements: commitment; expectations of suppliers; joint aspirations, (which is what we and our suppliers aim to achieve together) and KPIs to measure and

track progress. We also conduct risk heatmap analysis to establish priority themes by procurement category and region. For more information, see Risk Management - Sustainable supply chains.

In parallel we are accelerating our efforts to reduce our Scope 3 carbon emissions in line with the publicly announced 30% target as shown in Figure 6. The maturity of Procurement ESG objectives is illustrated in Figure 6. This activity has a strong cross functional governance in place, reporting directly into the Group's overall Sustainability Committee, chaired by the CEO.

External evaluation in FY2024/3

We are very pleased to announce that as in FY2024/3 we were again recognized that our efforts in working with our suppliers to improve in areas of ESG have been endorsed by an external assessment. We have been recognized by CDP in their most recent evaluation for CY2024 as a Leader in Supplier Engagement. This places us among the top 500 companies worldwide (out of a total of more than 13,000+ companies assessed), including 105 from Japan.

CDP is a non-profit organization that manages a global disclosure system for investors, companies, cities, states and regions to manage their environmental impact on climate change, water security and deforestation.

We use EcoVadis to cover and assess not only our procurement base, but also the requirements of our customers and investors. On the subject of 'sustainable procurement', we have managed to maintain our score of 70 out of 100 points. This places us in the top 3% of the glass industry.

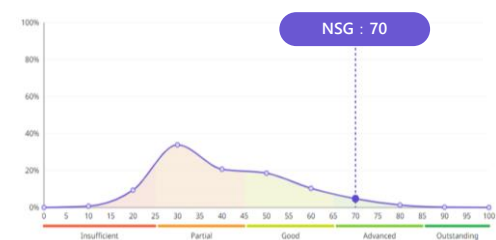
NSG Group has also taken the step in FY2023/3 to join the League of Champions within the Sustainable Procurement Pledge (SPP) organization. This network of individuals and companies is driving the agenda on Sustainable Procurement and Supply Chains. NSG is proud to join this group to help drive the program for Sustainable Procurement forward with even greater speed. In 2023 NSG contributed important materials for the SPP "Guide" document which supports organizations to improve on their ESG agenda and targets.

Fig6

Group Procurement – ESG Objective Maturity

	FY20	FY21	FY22	FY23	FY24	FY30
Initiatives to focus on in the relevant year	Simple KPIs	Maturing KPIs	Identifying Risk	Mitigating Risk	Sustainable Supply Chain	Delivery of Goals
EcoVadis	Target Spend Coverage by weighted average based on purchase price	Procurement Team formal objectives. 50% spend 50% score	FY21 plus: 55% spend 55% score	FY22 plus: 60% spend 60% score	FY23 plus: 65% spend 60% score	FY24 plus: 85% spend 60% score
	Average Score Average EcoVadis rating score of major suppliers	Education & raining of Global Procurement Team	Improvement through supplier collaboration	Low score action plans.		
その他					Additional to EcoVadis - Deliver Sustainable SC strategy based on ISO methodology. - Publish Supply Chain Charter. - Finalize Long Term sustainability Targets. - Deliver 50% NSG Renewable Electricity in 2024 - Finalize Roadmap for Scope 3 CO ₂ target - Implement Intelligent Risk Mapping	FY24 plus: - Deliver 30% Scope 3 CO ₂ reduction vs 2018 baseline - Target 85% Renewable Electricity - Aspire to 100% Renewable Electricity - Deliver all objectives resulting from FY24 strategy. - Integrated Supplier Risk Management system - Supplier diversity program fully embedded.

Sustainable Procurement Score Distribution



Ethics and Compliance



Executive Officer
Chief Legal Officer, Chief Ethics & Compliance Officer

Michael Kiefer

Ethics, Safety and Quality are essential for NSG Group to be sustainable.

NSG Group has in place the Group Ethics and Compliance (E&C) function and implements ethics and compliance programs in accordance with "Fundamental Policies of the Company on creation of effective internal control system of the Group" established by the Board of Directors.

The Group E&C function supports the Group in achieving its goals by assessing and analyzing ethics and compliance risks and establishing ethics and compliance programs that align with the Group's strategic goals to ensure the success of our business.

In line with these objectives, more specific key performance indicators (KPIs) were developed to help measure the effectiveness of the ethics and compliance programs on [page 35](#).

Ethics and Compliance is positioned as the Group's Materiality along with Safety and Quality in the new medium-term plan released in FY2025/3. As the FY2030/3 aspiration, we are committed to partnering with stakeholders and gaining trust from them by regularly improving the ethics and compliance programs to address Group risks. We, therefore, have established new targets for FY2027/3. Please see the following chapters for the specific KPIs.

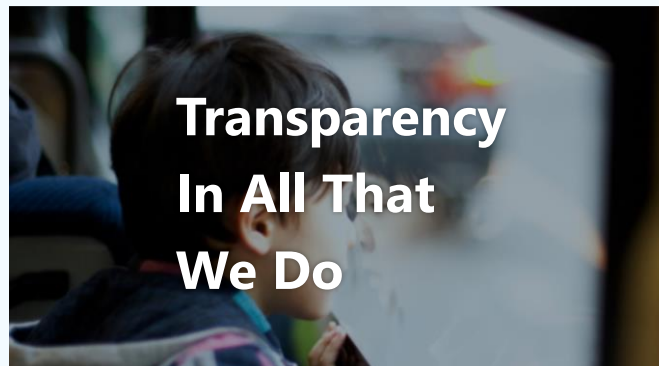
Code of Ethics and Education

The [NSG Group Code of Ethics](#) broadly covers the ethical behavior expected of our employees in the workplace, including compliance with all laws and all major Group policies, procedures and guidelines. The Code is available in all 19 Group languages.

The Group's new employee education is to cover not only the Code of Ethics, but also conflict of interest, fraud and IS security. Even for other existing Group employees, the IS security education is mandatory. Key Roles for competition law compliance (CC) and anti-bribery and anti-corruption (ABAC) are also required to complete the relevant online education. In FY2024/3, NSG Group enhanced its education interface and changed the name from the "NSG Ethics & Compliance Education Center" to "NSG Learn". This change reflects the growth of our education platform which now houses more various modules. The education modules will be assigned to the Group employees accordingly through the NSG Learn. We will

continuously monitor its effectiveness as well as the completion rate of the educations.

98.4 % of Key Roles completed relevant trainings during the annual education campaign in FY2024/3. 77 % of managers completed within 5 days before the deadline. The new KPI for FY2027/3 is 100% completion of ethics and compliance education. We will continuously make our best effort to raise the training completion rates.



1,228

New starters completed the training packages at their onboarding

FY2024/3

4,285

Key Roles completed the CC and/or ABAC trainings accordingly

FY2024/3

Ethics and Compliance

Ethics and Compliance Development Structure

Group E&C has a direct reporting line to NSG Group Audit Committee. Its responsibilities include the development, implementation and maintenance of an integrated internal ethics and compliance management and control system, as well as the creation and review of relevant Group policies and procedures. In FY2024/3, NSG Group appointed Chief Ethics and Compliance Officer (CE&CO) who is an Executive Officer. Under the CE&CO's leadership, E&C Director is responsible for managing the whole ethics and compliance program and E&C regional managers in Europe, North America, South America and Asia to embed ethics and compliance culture into the whole organization as well as cover risks in each region.

The Ethics and Compliance Committee, chaired by CE&CO and consisting of CEO and other executive members, was established in FY2025/3 to oversee the ethics and compliance programs and improve further its effectiveness. The first

Committee meeting was held in June 2024, and it will meet semi-annually.

A Global Ethics Network is aimed to enhance the ethical culture and monitor compliance risks throughout the Group. The Ethics Network consists of senior managers who have been appointed Regional Ethics Ambassadors and Ethics Champions. Both roles will play a vital part in the communication and promotion of the Code of Ethics by leading and championing ethics and compliance in their local region or function which in turn will help embed ethics into the business. Group E&C puts importance on local communications to reach out to local business/function people, liaising with the relevant Ethics Ambassadors and Champions.

Under the development structure mentioned above, NSG Group establishes, implements and improves the ethics and compliance programs. Moreover, we believe it is important to

understand employees' awareness of the programs for further improvement. The new KPI for FY2024/3 is, therefore, 90% or more agreement/favorability from employees as the evaluation of the ethics and compliance programs.

47

Ethics Ambassadors across SBUs and Functions all over the world

Communication on Ethics and Compliance

The Group has set Ethics and Compliance Week every year since FY2022/3, which reconfirms our commitment to ethics and compliance, raising awareness of its significance for the Group business. Various events are held throughout the Group organizations such as message videos from the executive officers and senior managers including C-suite, daily communications, regional activities and relevant online educations during the Week. The theme of the last year's E&C Week was "Integrity Builds Trust" to discuss what "integrity" meant for us, how it helped us build "trust" and what we should do in our workplace.

The theme for this year is "Transparency In All That We Do." The feedback of E&C Week and other surveys have showed that

some people still fear retaliation for reporting concerns. We need to further increase trustworthiness of the Reporting of Concerns system. "Transparency," such as "open communication" or "speak up," is essential to build trust between the company and employees or among employees. Transparency is also related to "integrity," which was the theme for the last year's E&C Week. This year, therefore, we will focus on what transparency means for the Group and think of how we should make transparency take root in the organization and put it into practice according to the Group's core values and action plans.

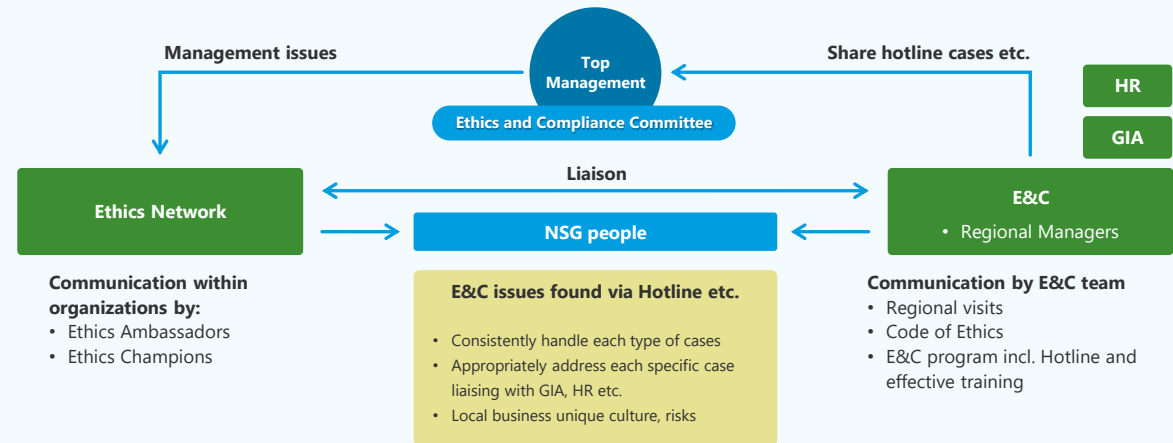
Additionally, each E&C regional manager visited major production sites in their regions in FY2024/3 to reach out to the

shop-floor workers there trying to make more direct and better communication with them about ethics and compliance.

Group E&C periodically issues Group Ethics and Compliance Briefings to employees. The Group's communications team translates the briefing into multiple languages and distributes to all NSG Group locations, which is also made available on the Group's Intranet. In addition, each regional E&C manager issues regional E&C newsletter to the relevant local employees.

Ethics and Compliance

Group E&C shares with the heads of Strategic Business Units and HR the case details reported via the E&C Hotline system to help improve the workplace environment and even business performance while taking care of its confidentiality.



The global structure towards effective solution to Group E&C issues

Respect for Human Rights

NSG Group is an International Company operating in many countries around the World. NSG recognizes business cultures and practices around the world are diverse. The NSG Group's commitment to respecting human rights is reflected in the way we run and operate our business as well as in our policies and guidelines. We respect human rights in accordance with the United Nations (UN) Universal Declaration of Human Rights, the International Labor Organization (ILO) Declaration on Fundamental Principles and Rights at Work, the United Nations Guiding Principles on Business and Human Rights (UNGPs) and, the UN Global Compact including any related conventions.

In FY2024/3, the Group formulated [Human Rights Policy](#) where we identified the most relevant human rights areas for the Group with our commitment in each.

NSG Group Human Rights Policy

NSG Group is an International Company operating in many countries around the World. NSG recognizes business cultures and practices around the world are diverse. The NSG Group's commitment to respecting human rights is reflected in the way we run and operate our business as well as in our policies and guidelines. We respect human rights in accordance with the United Nations (UN) Universal Declaration of Human Rights, the International Labor Organization (ILO) Declaration on Fundamental Principles and Rights at Work, the United Nations Guiding Principles on Business and Human Rights (UNGPs) and, the UN Global Compact including any related conventions.

NSG Group has further identified Human Rights areas which are most relevant for the Group.

- Data protection:** NSG Group is committed to protecting the rights and privacy of past, present and prospective customers, suppliers and employees. Information about individuals must be collected and used fairly, stored safely and securely and only be disclosed in a way that is consistent with international best practices and applicable laws and will not be stored for longer than necessary.
- Equal treatment:** As a diverse, multinational company, NSG Group aims to create equal opportunities for all employees regardless of any individual difference including, but not limited to, about personal background, race, color, creed, nationality, age, marital/partnership status, pregnancy and maternity, gender, gender assignment, sexual orientation, religion or other beliefs, ethnic or national origin, disability, union membership, political affiliation, other status protected by law. NSG Group will treat all individuals equal considering the responsibilities of their position during recruitment and selection, compensation and benefits and training, promotion, transfer or termination of employment.
- Fair Wage Practice:** NSG Group will pay workers a fair wage and benefits that meets their basic needs and enables them to live on adequate standard of living in the country of their employment, as defined by a credible authority such as the Global Living Wage Coalition.

- Harassment:** NSG Group will not tolerate any form (physical or verbal) of sexual harassment, intimidation, and discrimination on the basis of any individual difference including, but not limited to, about personal background, race, color, creed, nationality, age, marital/partnership status, pregnancy and maternity, gender, gender assignment, sexual orientation, religion or other beliefs, ethnic or national origin, disability, union membership, political affiliation, other status protected by law.
- Abuse of Labor:** NSG Group will treat each employee with dignity and respect, and will not use corporal punishment, threats of violence or other forms of physical, sexual, psychological, or verbal harassment, abuse or intimidation.
- Forced Labor:** NSG Group will not use forced, bonded, prison, military or compulsory labor.
- Child Labor:** NSG Group will not use child labor. The term "child" refers to any person employed under the age of 15 (or 14 where the law of the country permits), or under the age for completing compulsory education, or under the minimum age for employment in the country, whichever is greater.
- Freedom of Association:** NSG Group respects the rights of employees to associate, organize and bargain collectively in a lawful and peaceful manner, without penalty or interference.
- Supplier Principle:** NSG Group expects all suppliers to adhere to local laws and regulations, to the articles of the United Nations Universal Declaration of Human Rights and the core standards of the International Labor Organization. Detailed expectations are outlined in the NSG Group Sustainable Supply Chain Charter and Supplier Code of Conduct. For details, click [here](#).

Speaking Up

If any employee (current or potential), third party, contractor, supplier or other external parties believe someone is violating the Human Rights Policy or the law, they are asked to report it immediately to the line or relevant manager, Human Resources, Group Internal Audit, Group Legal, Group Ethics and Compliance or the [NSG Group 24/7 Ethics and Compliance Hotline](#) in accordance with the NSG Group Reporting of Concerns Policy. NSG Group takes concerns seriously and handles them promptly. NSG Group has zero tolerance for retaliation against anyone who speaks openly, in good faith, about conduct they believe is unethical, illegal, or not in line with our [Code of Ethics](#) and policies, even if the concern is not substantiated. For details, click [here](#).

Other relevant links:

[NSG Group Health and Safety Policy](#)
[Promoting Diversity, Equity & Inclusion](#)
[Environmental protection](#)
[Human Rights Transparency Statement](#)
[Conflict Minerals - Statement](#)
[Policy Statement on the Supply Chain Due Diligence Act issued by German entities](#) (in German only)

Munehito Hosonuma

Munehito Hosonuma
President & CEO
NSG Group June 2024

NSG
GROUP

Ethics and Compliance

Conflict of Interest Disclosure

Under our Code of Ethics, all employees are responsible for acting in the best interest of the Group. Employees are required to disclose any interest, activity or investment which actually or potentially could cause conflict against that of the Group. Group E&C reviews all reported disclosures and discusses certain matters with the relevant business or function managers if necessary. Feedback is provided to all reporters and in some cases, possible plans to mitigate exposure are also provided.

Activities for Competition Law Compliance and Anti-Bribery/Anti-Corruption

Regarding certain high-risk areas in the Group business such as competition law compliance (CC) and anti-bribery and anti-corruption (ABAC), NSG Group establishes and controls relevant policies, procedures and manuals. These internal rules stipulate a wide range of matters accordingly such as specific types of prohibited actions, the necessity and importance of compliance, and the impact of any violations to ensure that the Group conducts business in compliance with relevant laws of all countries where we operate.

There were no violations of competition law and anti-bribery and anti-corruption law in FY2024/3. The new ethics and compliance KPI for FY2027/3 also includes the target of zero case being fined associated with CC or ABAC violations. As mentioned in "Code of Ethics and Education" above, employees who meet the Group's criteria for CC and/or ABAC risks are appointed Key Roles accordingly and required to complete the relevant online educations at onboarding and annually, which includes explanations of the applicable laws and regulations and internal policies and requirements under the ethics and compliance programs as well.

Further, to ensure transparency of employees' actions, NSG

Group policies provide reporting requirements about CC and ABAC. Group E&C centrally manages an online reporting system where employees are required to document or obtain prior permission from Group E&C whenever they contact our competitors, join a trade association (CC risk controls), make charitable contributions, give or receive certain amount of gifts and entertainment, do businesses with third parties, and interact with public officials (ABAC risk controls). E&C regional managers confirm or approve the specific requests and notifications considering their regional or countries' risks.

NSG Group is monitoring around 500 third parties such as agents, consultants and joint venture partners that meet certain risk criteria of ABAC. This process includes due diligence, assessment and reputational screening.

Reporting of Concerns – Ethics and Compliance Hotline

NSG Group is committed to maintaining an environment in which employees can report, without fear of retaliation, any conduct they know of or suspect to be in violation of law, Group Code of Ethics policies/procedures or guidelines.

For this purpose, [the Ethics and Compliance Hotline system](#) provides an easy and simple way to report concerns, while employees are encouraged to speak to line management, HR or other relevant functions first. This Hotline system is also available for any stakeholders outside the Group.

Managers who received the report from their colleagues must file the designated reporting form (Manager's Report Form) or report it directly to Group E&C if they believe that it has a potential adverse or negative legal, financial or reputational impact on NSG Group.

Since inception in FY2013/3 there had been 987 reported concerns managed via the Ethics and Compliance Hotline system as of the end of March 2024. FY2024/3 experienced 174

allegations reported via the Ethics and Compliance Hotline and Manager's Report Form.

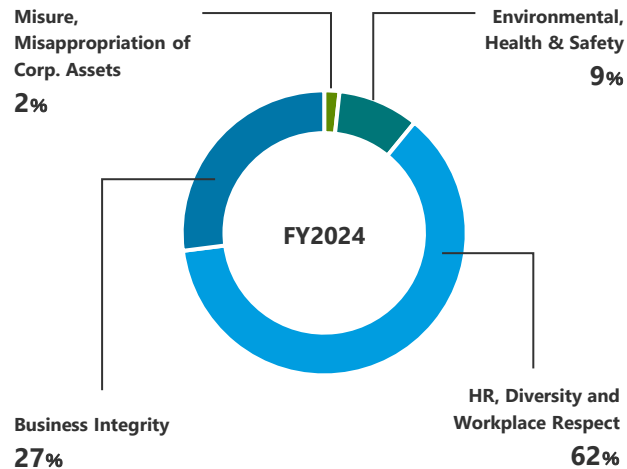
NSG Group constantly measures the effectiveness of the system by using the metrics against the benchmark region by region.

Hotline
Open to third parties
Anonymous report is acceptable unless prohibited by law.
7/24/365/Multiple languages
Toll free
Anyone can ask questions.
Operated by a qualified third party with a data privacy module

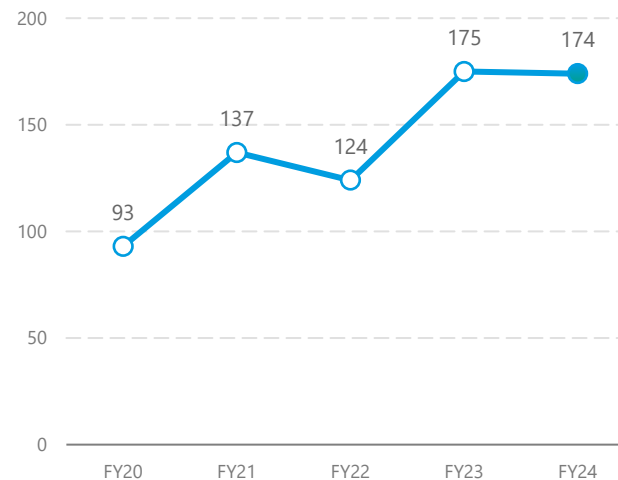
You can see the general trend of increasing numbers for the last few years. We understand that the recent actions have contributed to such increase of the reported cases; such as creation of or revisions to the relevant policies and our constant and continuous communications regarding the Reporting of Concerns System including Hotline through various channels like the aforementioned newsletters and online educations. NSG Group has set a new KPI for FY2027/3 of raising the ratio of substantiated reports to 45% or more. While seeing consistent numbers of reports ("quantity") as a result of our efforts mentioned above, we are now trying to analyze "quality" of the reports. Even if a report is not substantiated, it is of course still important as being reported. Our aim is to create a work environment in the organization that will enable us to address concerns more effectively by focusing on the ratio of substantiated reports as well.

Ethics and Compliance

Categories of the reported concerns (FY24)



Numbers of the reported concerns



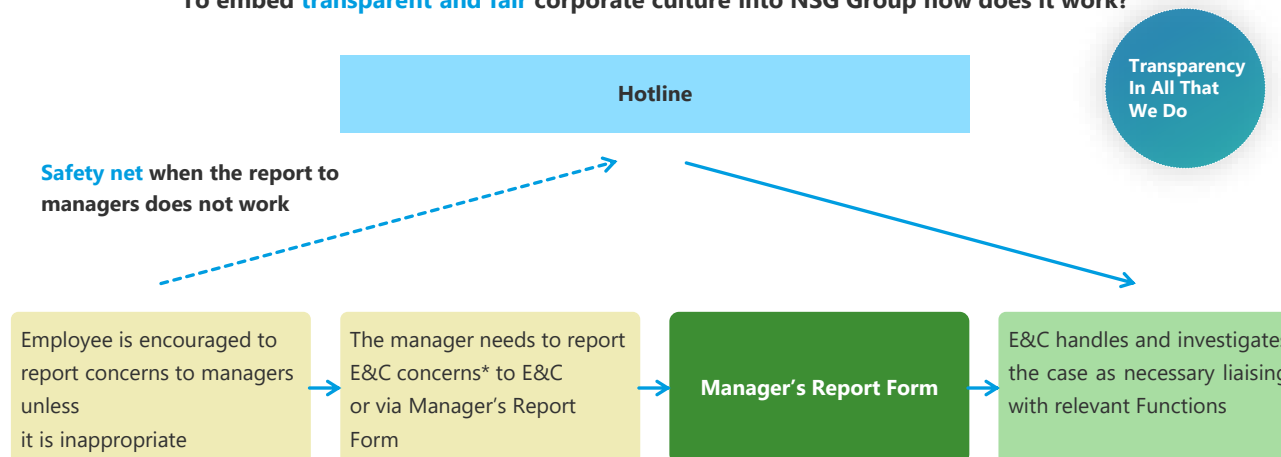
The Group Policies on Ethics and Compliance and Reporting of Concerns which were revised in FY2021/3 more clearly define the managers' reporting requirement and the process of the case investigation and its follow-up. We established the Group Anti-Retaliation and Reporter Protection Policy which more explicitly provides that the Group never tolerate any form of retaliation against those who report concerns in good faith. The new KPI for FY2027/3 is zero retaliation case.

This global Hotline would be also deemed as "Internal Whistleblowing System" for NSG and its consolidated subsidiaries in Japan in the context of the revised Whistleblower Protection Act of Japan coming into effect on June 1, 2022. We will continuously strive to embed "Transparency In All That We Do" committing to more open corporate culture.

Reports to Management Committee and Audit Committee

Group E&C reports to not only Management Committee but also Audit Committee which consists of Independent External Directors, periodically or on as-needed basis, on status, progress and issues of the above-mentioned ethics and compliance programs.

To embed transparent and fair corporate culture into NSG Group how does it work?



*Any concern that could potentially have an adverse or negative legal, financial or reputational impact on the Group.

Human Resources



Executive Officer Chief Human Resources Officer

Denise Haylor

NSG Group addresses “Human Capital” as one of the material issues (materiality) based on Our Vision, the management principles set out in 2018 to achieve sustainable growth of the Group and contribute to a sustainable society in the medium to long term. People are the “capital” and are essential to the business, both to sustain our business and to achieve growth. NSG Group believes that a strong corporate culture, an effective human resources system, and a work environment that provides opportunities for employees to develop and grow are essential. In short, this is the goal of “Human Capital Investment” and the role of the CHRO and the HR teams around the world is to enhance the effectiveness and efficiency of this investment and to continue to drive the growth required to meet our business objectives.

Alignment of People Strategy with Management Strategy

NSG Group has developed a people strategy to underpin the medium-term plan. The strategy has four key aspirations:

● Talent Acquisition

to improve our ability to attract talent.

● Diversity, Equity & Inclusion

to build an inclusive environment and create a source of competitive advantage.

● HR Digital

to build an ecosystem that puts our people first, provides accurate people analytics to make faster decisions, and frees up time for everyone.

● Value Proposition for Our Employees

answering why join, why stay and why perform.

These are our longer-term aspirations, and we also have several shorter-term goals, including:

- Strengthening the senior management team.
- Providing development and reskilling opportunities for all our employees.
- Promoting diversity, equity and inclusion as a source of competitive advantage.
- Building strong relationships with the communities in which we operate.

All underpinned by interactive and effective communication. All of which will be discussed further below.

Human Rights, Well-being

Among the six Core Values that form the basis of our work and conduct, “Respecting Others and Unleashing Their Potential” is the first value to which we are committed. The NSG Group has always valued and lived by the Sumitomo philosophy of “People are our most important asset” since its establishment in 1918.

The second Core Value is to “exemplify trust and integrity”. “NSG Group’s Code of Ethics”, which embodies these values, defines safety, respect for human rights, taking personal responsibility for actions, and open and inclusive communication as behaviors expected of all employees. The NSG Group Code of Ethics explicitly recognizes internationally proclaimed human rights. Our Equal Opportunities and Diversity Policy prohibits discrimination based on, but not limited to, personal background, race, color, creed, nationality, age, marital/partnership status, pregnancy and maternity, gender, gender reassignment, sexual orientation, religion, or other beliefs, ethnic or national origins, disability, union membership, political affiliation, or any other status protected by law. We have also placed a strong emphasis on health and safety as a top priority for NSG Group employees. Personal information about health must be handled sensitively and with particular attention to privacy, which necessitates different ways of handling the matter not only culturally but legally between countries and regions. For the time being, HR-related actions concerning health are limited to Japan so far. Further details will be provided in a separate section.

Respect for these human rights and wellbeing is the premise of the HR strategy, on which the shorter-term goals have been formulated:

Human Resources

Strengthening the senior management team

Our Leadership Behavior Charter serves as our guiding principle. We have observed a notable shift in the behavior of our leaders who have embraced the Charter. Our next step is to integrate the behaviors into all our leadership programs and ensure that communications are aligned with the Charter.

Our Leadership Behavior Charter

I will

- challenge the status quo to make a better future for our people
- be approachable and communicate openly and honestly
- communicate our Vision and direction clearly
- listen carefully when someone wants to discuss an idea
- empower and support people to reach their full potential
- show my appreciation and give praise to all colleagues
- act quickly to address the needs of the business
- make decisions quickly, openly communicating the criteria for decision making
- promote a diverse team and value an inclusive workplace
- commit to an open, safe, ethical and sustainable way of doing business

I support the team. I value One Team.

It is crucial to develop realistic succession plans for senior management members in conjunction with development plans. The plan is reviewed annually by the Nomination Committee, chaired by an Independent External Director, to assess potential enhancements. This includes promoting candidates' readiness, developing potential, clarifying concerns and gaps.

Providing development and reskilling opportunities for all our employees

In 2018, we introduced talent management as part of our wider talent strategy, which supports the Group's Vision and Values. We successfully migrated key global talent records and data to a Group-wide talent management system, while simultaneously providing all managers with comprehensive training on talent development processes. In 2019, we introduced our NSG Behavioral Competency model with the objective of enhancing the depth of performance review discussions for employees. As a result of these initiatives, employees now have greater transparency regarding their performance reviews. Talent data is now shared by management across countries, regions, and business units.

By 2025, our objective is to integrate talent management practices into the workplace and to develop leaders at all management levels who can implement the medium-term plan. Additionally, we will provide employees with reskilling training in areas such as digitalization, marketing, and new business development. By continually offering training, we have been facilitating the transition of our Group programs from traditional face-to-face learning events to a more diverse range of blended learning solutions, including virtual classrooms, action learning sets, and coaching.

In terms of hierarchical talent development, our primary objective is to accelerate the regional talent pool, which includes individuals below the level of global talent. Regular global talent meetings will be held with the objective of strengthening the identification and development of talent who will evolve into future global leaders.

Promoting Diversity, Equity & Inclusion (DEI) as a source of competitive advantage

In order to achieve our goals, it is essential that we foster an inclusive culture. We have made significant progress, including exceeding the target we set for female managers. Our Diversity, Equity and Inclusion Committee is active and promotes initiatives in every country in which we operate. This work is essential to attract and retain world-class talent.

For the new medium-term plan, our senior leaders met to discuss our metrics and designed and agreed upon a set of stretch targets. Nevertheless, inclusion is not solely a matter of metrics. We will continue to prioritize the aspects that are important to our current and prospective employees.

Human Resources

Building strong relationships with the communities in which we operate

In light of the experience gained from the Covid-19 pandemic, we have adopted a flexible approach to learning and interaction. It is crucial for individuals to interact in person, though we acknowledge the potential challenges this can present and encourage flexibility when feasible.

We hosted a series of community events at our various sites worldwide. A commitment to being a good neighbor strengthens the bonds between our internal and external stakeholders.

All underpinned by interactive and effective communication.

Open and transparent communications are essential for fostering an inclusive and high-performing organization. We have made significant progress in enhancing communications across the Group through various channels including Your Voice employee surveys, town hall meetings, updates to our intranet, and written and verbal updates.

It is essential to facilitate a dialog between employees and their managers around performance and development in order to establish a performance culture. In 2024, a new performance management approach was implemented. The approach was developed in accordance with external best practice, feedback from employees and managers and the strategic goals of the Group.

The Your Voice survey continues to provide invaluable insights into our people strategy. The 2023 survey revealed a notable increase in several key areas which highlights the effectiveness of our listening strategy. We will continue to monitor our progress via Let's Talk sessions and by administering the survey again in 2025.

We believe that by implementing these measures, we can continue to build an inclusive organization where every employee feels valued and can perform at their best.



Efforts to Quantify As-is and To-be Gap

NSG Group has an established talent strategy that provides the key steps to help people join our organization, stay, develop, and perform. The first step in our talent strategy is the setting of our strategic goals and the creation of an organization design that supports this strategy, ensuring all employees are clear on what this means for them and the skills that are needed to deliver this strategy.

On an annual basis we assess our skills gaps, evaluating the talent we have through performance management, succession planning and assessment of potential activities. These activities help to identify the skills gaps we have and prioritize these against our strategy. We continue to develop our people through growth opportunities, rich career experiences supported by formal learning opportunities where appropriate.

All of our Strategic Business Units have regular reviews of the talent and high potential individuals in their areas, while more locally we focus on the development of all employees. In FY2024/3, training was delivered to all managers to develop their coaching skills helping them to have more effective performance discussions.

In FY2025/3, we will focus on developing our employer brand to ensure that we attract top talent externally but also have a brand that ensures our current employees are proud of the

organization they work in, this further helps to support the retention of talent.

We also continue to enhance our Group leadership development programs, supporting over 150 leaders in their formal development activities year on year. Our talent management system implemented in 2018 has been updated to include learning management functionality to have a global record of training.

Our Group wide employee survey, Your Voice, plays a critical role in helping us to understand the areas where we have gaps and need to improve and also helps to identify the key strengths that we have as an employer. In 2023, 80% of our population, over 21,000 people, shared their thoughts with us in response to the survey. 77% of those who responded would recommend NSG Group as a good place to work. The 2023 survey saw an improvement across all categories surveyed compared to the survey conducted in January 2022, meaning our people feel more positive and actions that were implemented as a result of the 2022 survey can be felt across all of our locations.

Human Resources

Promoting Diversity, Equity & Inclusion (DEI)

NSG Group had been firmly committed to further improve DEI, embracing the internally and externally declared Statement of Intent and one of our Core Values, “Respect Others and Unleash their Potential”. In June 2023, NSG Group announced that we formulated the Diversity, Equity & Inclusion (DEI) Policy that develops and evolves Equality into Equity to enhance and accelerate the Group’s current State of Intent to promote Inclusion & Diversity.

NSG Group DEI Policy			Statement of Intent
<p>We will create and develop an organization where each and every one of us will shine brightly like glass.</p>			<p>Having an Inclusive Culture and Environment: We give everyone an equal opportunity to contribute to their full potential and harness the richness of ideas.</p> <p>Having a Diverse Workforce: Any differences in individuals' backgrounds, experiences, preferences and beliefs are recognized, respected and valued for their variety of perspectives.</p> <p>We continue to live by this statement.</p>
<p>Diversity Recognize individual differences, respect each other, and create value</p>	<p>Equity Providing suitable opportunities for each individual to demonstrate their strengths</p>	<p>Inclusion Everyone feels safe to voice their opinions, discuss, and lead decisions</p>	

1) Our effort

NSG Group has a Global DEI Steering Committee which was established with the aim of enhancing Diversity, Equity & Inclusion across the entire Group. The Committee comprises members covering all Strategic Business Units, functions, and regions. It works with individual businesses to identify and implement local, regional, and global initiatives, identifying areas for improvement and measuring progress. One central focus is to move DEI beyond the Human Resources team and establish it within all thinking.

2) Taking action

We aim to create an environment where everyone feels valued and respected. Embracing diversity, ensuring equity, and fostering inclusion are integral to who we are and how we operate. We aim to attract and recruit a wide range of talent from diverse backgrounds and work to ensure our job descriptions are free from bias. We provide training to help employees understand and embrace diversity, equity, and inclusion on topics such as unconscious bias and inclusive leadership.

We maintain a workplace free from discrimination and harassment where everyone feels they belong. Any form of harassment or intimidation is forbidden.

We regularly review our pay and benefits to ensure they are fair and competitive. We provide benefits that cater to the diverse needs of our workforce, such as parental leave and

health and wellness programs. Our policies and practices are reviewed regularly to eliminate biases.

In line with the annual Group and Regional DEI Action Plans, each country or site is responsible for implementing their own actions.

Examples of diversity days celebrated are days such as International Women’s Day and International Day of People with Disabilities. Diversity, Equity & Inclusion objectives have also been set for our senior leaders and various countries have also set up their own Diversity, Equity & Inclusion country committees.

Human Resources

3) Promotion of female career advancement

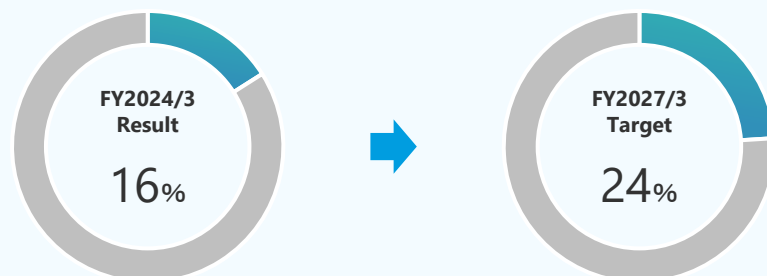
NSG Group supports our female career development through Diversity, Equity & Inclusion programs. We were certified as Platinum Kurumin Certification by Japanese Ministry of Health, Labor and Welfare in 2019 as we achieved high standards of the targets for our employees to satisfy both their career and childcare.

Examples of improvements include: greater visibility for females in succession planning discussions, identifying and confirming the positions to which female managers can be positioned, and encouraging more paternity leave. Online workshops have been regularly held for female managers to improve their networking and career planning opportunities, which in turn have helped with career motivation for participants.

We also introduced an exchange program with Sumitomo Group female members. During an online career seminar in 2021, attended by several companies in the Sumitomo Group, participants explored opportunities to discuss their own leadership style and consider future career options. We also have been actively participating in external workshops and recurrent education programs at universities. Their experiences were shared within the company and contributed to our female career advancement.

NSG Group's Global DEI Steering Committee set a goal of increasing the female managers ratio across the Group by at least 1% from the level of 12.7% at the end of June 2021 in each Strategic Business Unit and Function by FY2024/3. In FY2024, the actual rate improved to 16%, an improvement of 3.3% that exceeded the target.

Female managers in NSG Group

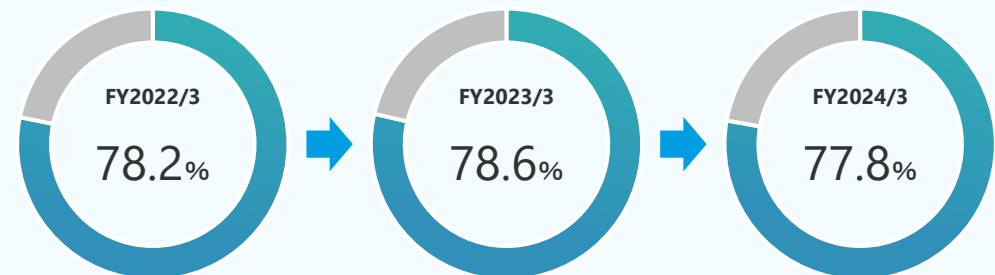


4) Promotion of foreign and mid-career employees

We operate as an integrated international Group, with a multinational management team. We believe that our diverse workforce with its range of nationalities, skills, qualifications, and experience is a substantial benefit to our business. Our management style is to put the best person in each job, regardless of nationality or region. Our overseas subsidiaries are managed by local leadership teams.

NSG Group has a diverse workforce with its range of skills, qualifications, and experience in the world. We are promoting mid-career employment in Japan to satisfy the skills and careers required by our businesses and functions.

Foreign Senior Managers in the Group



New employment in Nippon Sheet Glass

	FY2022/3	FY2023/3	FY2024/3
New Graduates	11	5	14
Mid-careers	26	49	79

Human Resources

Wellbeing / Health Management

The NSG Group believes that “People are our most important asset”, and health promotion is indispensable for employees to maximize their individual abilities, and it leads to the sustainable improvement of the company’s value. In January 2020, we made a “Health Management Declaration” in Japan.

Based on this Health Management Declaration, we are considering health management activities from a management perspective to create an environment where employees can thrive, promote employee health, increase engagement, and are strategically implementing and promoting a variety of initiatives.

Health Management Declaration

In order to improve the sustainable value of the Group and contribute to society, we believe that the health of employees and their families is the foundation.

Since its establishment in 1918, Sumitomo’s philosophy of “People are our most important asset” has been valued, and “Respect others and unleash their potential” has been set as the first core value in the current corporate principles of “Our Vision”.

Based on the idea, the Group is working on promoting the health of each and every employee and advancing the health management so that employees can maximize their abilities.

Main Initiatives

1) Improving health literacy (health awareness) and promoting health among employees and their families

We aim to enhance health awareness by implementing education and seminars on various topics for health promotion and disseminating information on health. Every year, we strive to ensure that our health management policies, initiatives, and progress are carried out in a unified manner through explanations to employees at general meetings at our workplaces and discussions in committee activities attended by employee representatives.

2) Medical checkup

We identify and improve those with abnormal findings by conducting regular medical checkups twice a year and specific health guidance. Through collaborative health with the health insurance association, we follow up on various medical checkups and specific health guidance, and the results of the scoring report show that there has been an improvement in health scores. These activities

are not carried out for a single fiscal year, but rather are undertaken with a focus on the medium term, in consultation with medical staff, labor unions, and health insurance associations.

3) Measures against lifestyle diseases

We offer menus that reduce salt and correspond to calorie intake in the employee cafeteria, and also improve nutritional balance, provide nutritional guidance, and set up consultation desks and provide information. Regarding exercise habits, we are working to improve them by improving our training facilities, partnering with external institutions, and holding various events. Regarding measures to reduce smoking habits, we hold in-house events such as seminars, provide ongoing health guidance to employees who wish to quit smoking, and subsidize outpatient smoking cessation treatment costs.

4) Improved mental health and employee engagement

Stress Check Program has been conducted in Japan since 2016. While the Group results are available, we provide feedback to each organization, since employees’ stress levels actually vary by organization and job role, in order to improve employees’ stress at work. We aim to improve employees’ satisfaction (engagement) with their work and the company, which are related to employee well-being (being in good physical, mental and social condition) since this leads to employees working with enthusiasm. We also believe that it is important to hold various events to heighten a sense of unity and bond within the Group and to improve communication in the workplace, and we implement trainings for managers and supervisors.

5) Work style reforms

We believe that enabling a diverse workforce to choose diverse working styles, such as creating an environment where employees with childcare or elderly care responsibilities can work comfortably, strengthening working hours management and reducing total working hours, and increasing the rate of paid holiday taken, will lead to the vitality of the company, and we are working on these initiatives through discussions between labor and management.

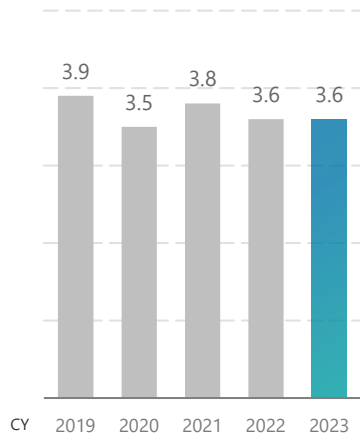
We have been recognized as Certified Health and Productivity Management Organization since 2019. The NSG Group is working to improve the environment for realizing diverse working styles, and we are reviewing the way organizations and individuals should be and aim to shift to a new work style that maximizes productivity and performance.

Our people are our source of competitive advantage, and we will continue to have our people at the center of what we do.

Non-Financial Highlight

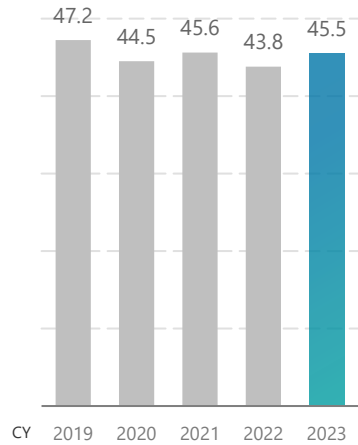
CO₂ emissions*¹

(Mt)



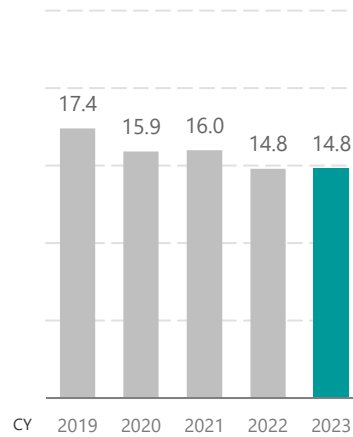
Energy Usage

(PJ)



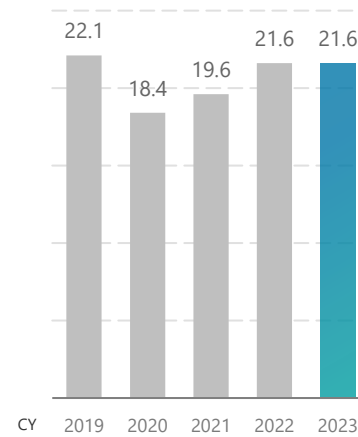
Water Usage

(Mm3)



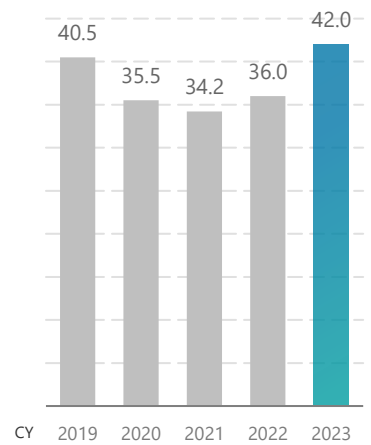
Operational waste to landfill*²

(Kt)

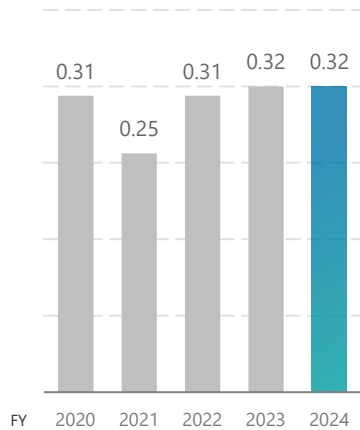


Recycling (not glass)

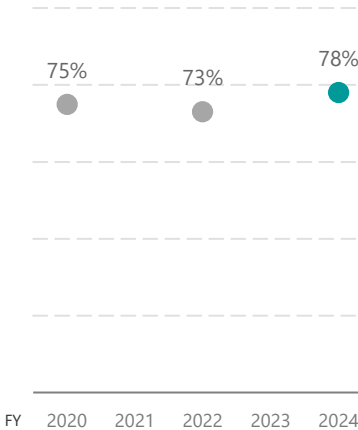
(Kt)



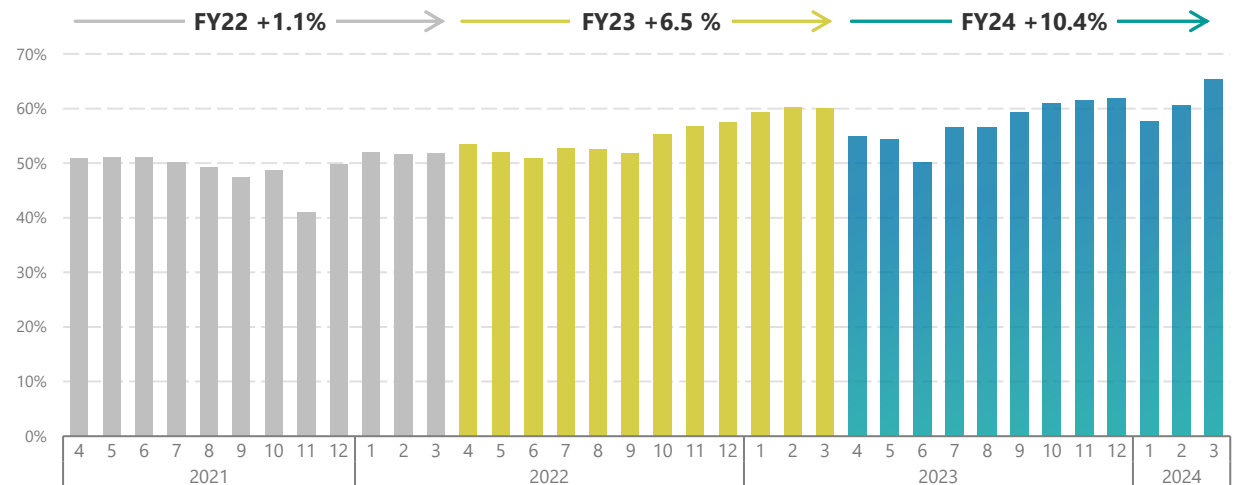
Significant injury rate (SIR)



Employee engagement



3 Year Performance of Supplier Spend Assessed by Eco Vadis*³

*¹ Total CO₂ emissions of Scope 1 and Scope 2 Location*² Indicates total amount of glass and non-glass landfill waste*³ Procurement spend basis

Corporate Governance



Senior Executive Officer
CAO, and Company Secretary

Koichi Hiyoshi

Nippon Sheet Glass Group (the "NSG Group" and the "Group") believes that achieving and maintaining an advanced level of corporate governance is a key management agenda. We have created and adopted "NSG Group Corporate Governance Guidelines", supporting and endorsing the spirits and principles of Corporate Governance Code provided by Tokyo Stock Exchanges. These Guidelines are intended to define and embed the basic principles and framework of our corporate governance in the organization. To further secure such purposes the Group has also adopted a self-disciplinary approach for the Guidelines which, among others, requires it to give a reasonable account to our shareholders if the Group should proceed with any actions deviating from these Guidelines.

NSG Group Corporate Governance Guidelines Fundamental Principles

The Group considers achievement of an advanced level of corporate governance a key management objective and will implement the following.

(1) Organizational structure

The Group's ultimate parent company, Nippon Sheet Glass Company, Limited will adopt a Company with Three-Committee structure and the Company hence will establish and maintain the Board of Directors (the "Board"), the Nomination Committee, the Audit Committee, the Compensation Committee (individually referred to as the "Committee") and office of Executive Officers. The Board will authorize the Executive Officers to make decisions on the execution of businesses for the Company within the scope as permitted by law, thereby facilitating separation between business execution and oversight, enhancing the transparency of the management processes and strengthening the Board supervisory function over the executive management. The Company will establish and maintain an internal control system operating on a Group-wide basis including in relation to financial reporting (J-SOX).

(2) Stakeholders Communication

The Group aims to be judged by as best in class by our many stakeholder groups in a variety of settings across the whole group (including shareholders, customers, suppliers and local communities) from their own perspectives and also will develop, maintain and enhance good relationship with any of such groups. In relation to the matter of disclosure of corporate information whether or not it is to be made according to legal requirements, the Group always aims to act in a timely and appropriate manner both in terms of the substance and form, with a view to maintaining and invariably enhancing transparency of management of the Group.

(3) Code of Conduct

The Group will, in order to materialize those values, create the NSG Group Code of Ethics which all entities and employees etc. of the Group must comply with and will be regularly reviewed in light of the status of implementation/embedding within the Group and the contents.


For details of the [NSG Group Corporate Governance Guidelines](#), please refer to the NSG website.

Overview of Corporate Governance Structure (As of 27 June 2024)

Type of Governance structure	Company with Three Committees	
Number of Directors / term of office	6 / 1 year	
Number of Independent External Directors	5	
Chair of the Board	Mr. Hiroshi Ishino (Independent External Director)	
Chair of Three Committees	Nomination	Mr. Hiroshi Ishino (Independent External Director)
	Audit	Mr. Kunihito Minakawa (Independent External Director)
	Compensation	Dr. Jörg Raupach Sumiya (Independent External Director)
Number of Executive Officers (Representative Executive Officers) / term of office	14(1) / 1 year	
Compensation system	Executive Officer (including those who concurrently serve as Directors)	(1) Fixed salary(Basic salary) (2) Performance-linked compensation i Management Incentive Plan (annual bonus) ii Long-term Incentive plan (3) Stock Compensation
	External Director	The level of compensation set at the appropriate level based on comparisons with other companies using benchmark data provided by specialist external advisers(Fixed salary)
Accounting Auditor	Ernst & Young ShinNihon LLC	

Corporate Governance Report

For details of the NSG Group Corporate Governance Guidelines, please refer to the NSG website.

 [Corporate Governance Report](#)
(as of June 2024)

 [Approach \(nsg.com\)](#)

Corporate Governance

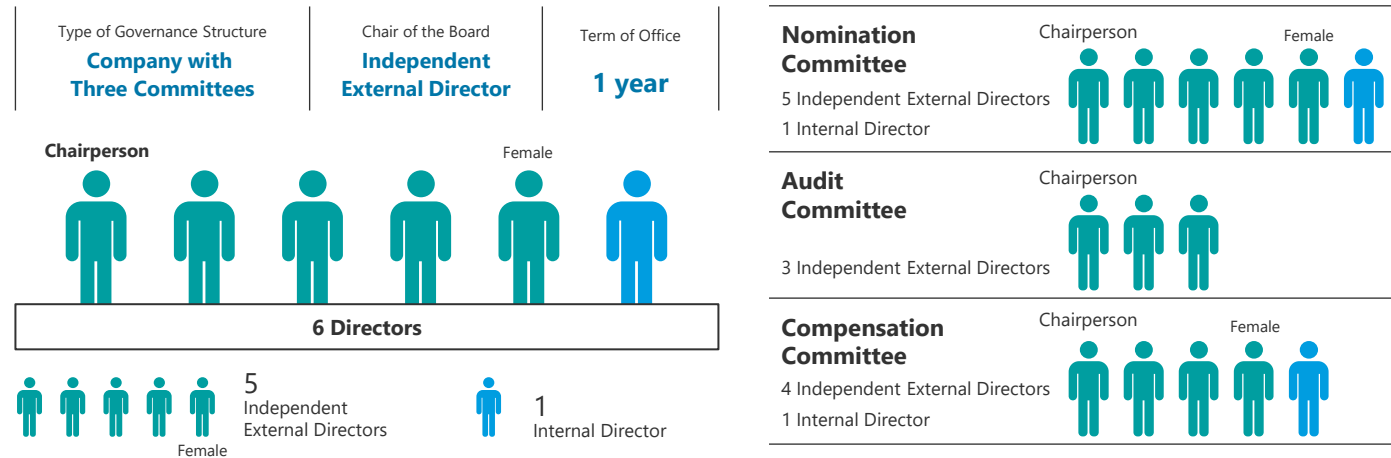
Corporate Governance Structure

NSG Group adopts “Company with Three Committees” governance structure, and has in place, as statutory corporate organizations, Board of Directors and —Nomination Audit and Compensation Committees, and an office of Executive Officer. Currently, the Chairperson of the Board as well as chairpersons of all three Committee are all appointed from among the Independent External Directors.

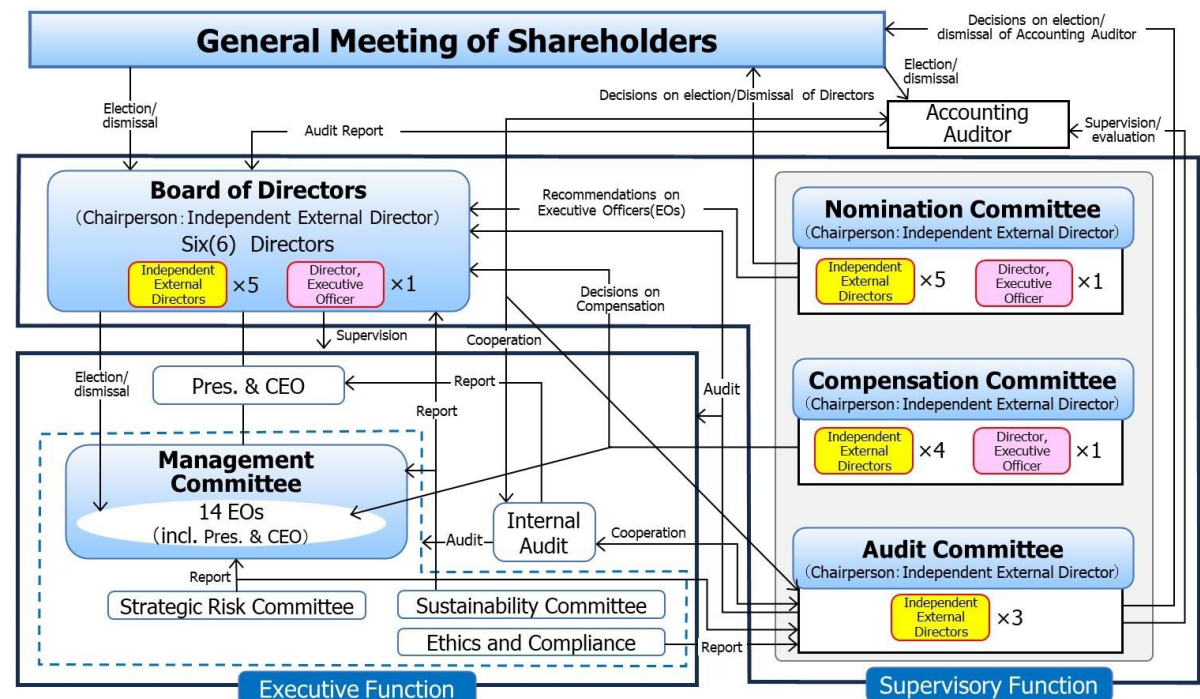
Various steps have been taken to date so that NSG Group has enhanced management transparency by further separation of functions between business execution and its supervision and strengthened role of independent external directors. For example, according to the NSG Group Corporate Governance Guidelines, the majority of the members of the Board of Directors are Independent External Directors. Also, the roles of Chairperson of the Board and CEO are clearly distinguished. In the event that Chairperson of the Board is not an Independent External Director, an Independent External Director among them who is entrusted to perform specified tasks such as making of contribution to communication, coordination and cooperation between the Independent External Directors and the Executive Divisions and rendering of support to the Chairperson of the Board in relation to any issues of corporate governance. Independent External Directors meet on an as-needed basis, even without presence of executives, for discussion concerning matters such as corporate governance and businesses. In addition, the Board appoints the Company Secretary, the Company Secretary is responsible for promoting initiatives for efficient functioning of the Board and each Board Committee.

As regards executive function, the Group also has Management Committee, Sustainability Committee, and Strategic Risk Committee. Currently, fourteen (14) Executive Officers are responsible for the business execution. One (1) of them are Representative Executive Officer performing the duties of CEO.

Outlines of our Management Structure (as of 27 June 2024)



Corporate Governance Mechanism (as of 27 June 2024)



Corporate Governance

Board of Directors (As of 27 June 2024)



Hiroshi Ishino

Independent External Director
Chairperson of the Board
Chairperson of
Nomination Committee

1975 Apr Joined Mitsubishi Corporation
2003 Mar Joined Kansai paint Co., Ltd.
2006 Jun Director, Deputy General Manager, International Affairs, Kansai paint Co., Ltd.
2008 Jun Managing Director, Sales, Coatings Business, Kansai paint Co., Ltd.
2010 Apr Senior Managing Director, Sales, Kansai paint Co., Ltd.
2011 Jun Director, Senior Managing Executive Officer, Sales, International Affairs and Procurement, Kansai paint Co., Ltd.
2012 Jun Representative Director, Senior Managing Executive Office, Sales, International Affairs and Procurement, Kansai paint Co., Ltd.
2013 Apr Representative Director and President, Kansai paint Co., Ltd.
2019 Jun Senior Corporate Advisor, Kansai paint Co., Ltd.
2020 Jul Director, the Company (Incumbent)
2024 Jun Honorary Advisor, Kansai paint Co., Ltd. (Incumbent)



Jörg Raupach Sumiya

Independent External Director
Chairperson of Compensation Committee

1990 Jun Senior Consultant, Roland Berger Strategy Consultants
1995 Oct Senior Executive Managing Director, Trumpf Corporation
1999 July Research Fellow, German Institute for Japanese Studies
2001 Jan General Manager, Administration, NEC Schott Components Corporation (Currently Schott Japan Corporation)
2002 Dec President, Representative Director, NEC Schott Components Corporation
2011 Jan Manager, Innovation, Schott Electronic Packaging GmbH
2011 Sep Professor, FOM University (Germany)
2012 Apr Professor, College of Business Administration Ritsumeikan University (Incumbent)
2019 Jun Director, the Company (Incumbent)



Kunihiro Minakawa

Independent External Director
Chairperson of Audit Committee

1978 Apr Joined RICOH CO., LTD.
1997 Oct SVP and CFO, Ricoh Americas Corporation
2008 Jan Business Planning Manager and Business Management Manager, Business Management center, Overseas Division, RICOH CO., LTD.
2009 Apr General Manager, Finance and Accounting, RICOH CO., LTD.
2010 Apr Corporate Vice President and General Manager, Finance and Accounting, RICOH CO., LTD.
2012 Apr Corporate Senior Vice President and General Manager, Finance and Accounting, RICOH CO., LTD.
2013 Jun Corporate Auditor (Full-time), RICOH CO., LTD.
2017 Jun External Director, Sony Corporation
2018 Jun External Director, Santen Pharmaceutical Co., Ltd.
2019 Apr Financial Services Agency Certified Public Accountants and Auditing Oversight Board Commissioner (Incumbent)
2020 Jul Director, the Company (Incumbent)
2024 Jun External Director, Mitsubishi Electric Corporation (Incumbent)



Shinji Asatsuma

Independent External Director

1984 Apr Joined Kansai paint Co., Ltd.
2012 Apr Executive Officer, General Manager Corporate Planning Office, Kansai paint Co., Ltd.
2015 Apr Senior Executive Officer, General Manager International Div., Kansai paint Co., Ltd.
2016 Jun Director, Senior Executive Officer, General Manager Administration Div., Kansai paint Co., Ltd.
2018 Apr Director, Senior Executive Officer, in charge of Business Management, Corporate Planning, IS, Human Resources Planning, General Manager Administration Div., Kansai paint Co., Ltd.
2019 Jun External Director, Kyushu Railway Company Director, the Company
2022 Jun Director, the Company (Incumbent)



Eriko Sakurai

Independent External Director

1987 Jun Joined Dow Corning Corporation (Currently Dow Silicones Corporation)
2008 May Director, Dow Corning Toray Co., Ltd. (Currently Dow Toray Co., Ltd.)
2009 Mar Chairman and CEO, Representative Director, Dow Corning Toray Co., Ltd.
2011 May Regional President Japan/Korea, Dow Corning Corporation
2014 Jun External Director, Sony Corporation (Currently Sony Group Corporation)
2015 Jun External Director, Sumitomo Mitsui Financial Group, Inc (Incumbent)
2018 Jun Chairman and CEO, Representative Director, Dow Toray Co., Ltd.
2020 Aug President, Representative Director, Dow Chemical Japan Limited
2022 Mar External Director, Kao Corporation (Incumbent)
2022 Jun External Director, Astellas Pharma Inc. (Incumbent)
2023 Jun Director, the Company (Incumbent)



Munehiro Hosonuma

Director
Representative Executive Officer
President and Chief Executive Officer (CEO)

1998 Apr Joined Nikken Sekkei Ltd.
2005 Jul Joined Boston Consulting Group
2010 Oct Joined Sumitomo 3M Limited (Currently 3M Japan Limited) Business Development Senior Manager, Display and Graphics Business Group
2013 Sep General Manager, Cleaning and Workplace Safety Division, Sumitomo 3M Japan Limited
2017 Apr General Manager, Infection Prevention Division, 3M Japan Limited
2018 Aug Joined the Company Senior Corporate Officer, Chief Corporate Planning Officer
2021 Jan Senior Executive Officer, Head of Architectural Glass SBU
2022 Apr Representative Executive Officer, Vice President and Chief Operating Officer
2022 Jun Director (Incumbent)
2023 Apr Representative Executive Officer, President and CEO (Incumbent)

	Length of incumbency as Director	Number of the Company's common shares owned	Composition of Committees (◎=Chairperson, ○=member)			Number of attendance during FY2024/3 (Number of attendance / Number of held)			
			Nomination Committee	Audit Committee	Compensation Committee	Board of Directors	Nomination Committee	Audit Committee	Compensation Committee
Hiroshi Ishino	4 years	8,268	◎	—	—	100%(10/10)	100%(6/6)	100%(11/11)	100%(7/7)
Jörg Raupach Sumiya	5 years	3,391	○	○	◎	100%(10/10)	100%(6/6)	100%(11/11)	100%(7/7)
Kunihiro Minakawa	4 years	4,131	○	◎	○	100%(10/10)	100%(6/6)	100%(11/11)	100%(7/7)
Shinji Asatsuma	2 years	1,714	○	○	○	100%(10/10)	100%(6/6)	91%(10/11)	100%(7/7)
Eriko Sakurai	1 year	805	○	—	○	88%(note)(7/8)	—	—	—
Munehiro Hosonuma	2 years	55,535	○	—	○	100%(10/10)	100%(6/6)	—	100%(7/7)

(Note) Eriko Sakurai was newly appointed as Director at the 157th Ordinary General Meeting of Shareholders held on 29 June 2023 therefore it shows the total number of the Board of Directors meetings held and attended after her assumption

Corporate Governance

Executive Officers (As of 27 June 2024)

Director,
Representative Executive Officer
President and Chief Executive Officer

Munehiro Hosonuma

Representative
Executive Officer



Executive Officer,
Chairperson of the Company

Shigeki Mori

Executive Officer,
Chairperson of the Company



Head of Architectural Glass

Leopoldo Garces Castiella

Senior Executive
Officer



CAO, and Company Secretary

Koichi Hiyoshi

Senior Executive
Officer



Head of Creative Technology

Hisashi Okamoto

Senior Executive
Officer



Chief Financial
Officer

Akihito Okochi

Senior Executive
Officer



Head of Automotive

Rob Purcell

Senior Executive
Officer



Chief Technology Officer

Mike Greenall

Executive
Officer



Chief Human
Resources Officer

Denise Haylor

Executive
Officer



Chief Risk Officer (CRO)
and Assistant CFO

Masaki Kambayashi

Executive
Officer



Chief Legal Officer,
Chief Ethics &
Compliance Officer

Michael Kiefer

Executive
Officer



Sustainability Director

Shiro Kobayashi

Executive
Officer



Chief Strategy Officer

Yohei Nakatsuji

Executive
Officer



Finance Director

Iain Smith

Executive
Officer



Corporate Governance

Policies and procedures for the appointment of the senior managers and nomination of the director candidates

The nomination of director candidates

The Company will decide a candidate for Director at the Nomination Committee, chaired by Independent External Director and composed of six (6) Directors including the Chairperson, five (5) of whom are Independent External Directors and submit the details to the ordinary general meeting of shareholders as a proposal. For such appointment, in particular with Independent External Directors, the Group finds candidates from a wide range of pools with the cooperation of executive search companies and others. The standards for the appointment are as follows. On the appointments of directors based on the standards, the company aims to have a well-balanced level of expertise as defined in Clause 7 in the board of directors as a whole, and diversity in terms of gender, internationality, work experience, and age.

The standards for the appointment of the director candidates

Personality, Insight, leadership	1. Being a person of good character and high ethical standards. 2. Upholding and promoting compliance with laws and regulations. 3. Being fit to hold office and able to fulfil the duties required 4. Possessing excellent business acumen and the ability to make judgements objectively. 5. Having abundant leadership experience and being team orientated.
No material interest	6. Having no personal interest or business relationship that might affect management decisions in our Group's business areas. ("Criteria of Independency for an External Director" is defined separately at:)
Skill/Expertise	7. Having broad business experience globally or multi-nationally and/or such specialized knowledge in market, technology, accounting, law, talent development, or other specific fields that are necessary or desirable for directors based on the current situation of the group, strategies, etc.
Commitment	8. Being the person who agrees with the philosophy and basic stance set forth in "NSG Group Corporate Governance Guidelines" and "Board of Directors Charter" and can be expected to perform his/her duties accordingly. 9. Having sufficient time to participate in meetings of the Board and the Committees of which he/she would be a member and being qualified to fulfil the duties as a member of one of any three committees on which he/she would sit: Nomination Committee, Audit Committee or Compensation Committee.

Criteria of Independency for External Director at NSG

An External Director is a director who has never been a director, executive officer nor employee of the company nor its subsidiary. To enhance the transparency of business management, the Company has appointed five(5) External Directors out of the six(6) Directors, five of whom are designated as Independent Directors under the TSE.

In addition to the criteria for independency defined by the TSE, the Company has established its own criteria of independency for External Directors, taking into consideration their relationship with the Group including such with its officers and major shareholders. All of the five External Directors satisfy the criteria of independency, its officers, major shareholders, etc. These all five External Directors meet the relevant criteria of independency.

Please refer to the Group's Criteria of independency for External Directors

 [the Group's Criteria of independency for External Directors.](#)

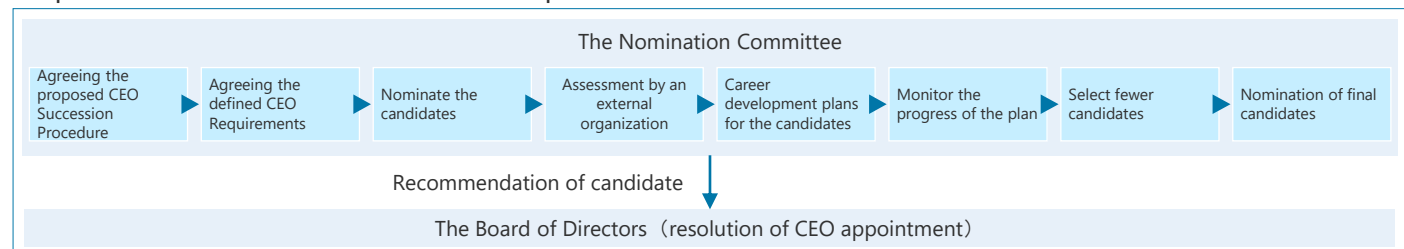
The appointment of the senior managers

The Board of Directors will, on the basis of recommendation rendered by the Nomination Committee in advance, appoint or dismiss senior executive managers including Executive Officers. Each Executive Officer (EO or Shikkou-Yaku) (collectively referred to as "Executive Management") is appointed by resolution of the Board, as well as being assigned the specific executive or senior positions and responsibilities within the Group such as CEO, COO, CFO, CAO and head of business/function which will usually be associated with either the title of EO accordingly. Prior to the appointment and/or assignment of each candidate, a comprehensive review of the candidate's proven performance to date, potential caliber as a leader, and commitment to the Group's future direction, Values & Principles like "Our Vision" and communications with

Stakeholders and Competencies is completed. The Nomination Committee clarifies the qualifications for a top managing officer and required personality or character as a part of the Chief Executive Officer's succession plan. Further, the Company formulates and operates training programs and leadership

development plans for management development needs. In case the incumbent CEO is also a member of Nomination Committee, he/she will not be involved in any decision or discussion as to his/ her own succession plan, except only where he/she expresses his/her opinion in response to specific request if any from the Nomination Committee to do so.

The process of the Chief Executive Officer's succession plan



Please refer to the Policies and procedures for the appointment of the senior managers and nomination of the director candidates



[Policies and procedures in appointment and dismissal of the senior management and the nomination of the Director candidates](#)

Corporate Governance

Director Skills Matrix

In order to develop and enhance the enterprise value of the Group in a sustainable manner on a medium to long term basis, the Board is required to effectively supervise the execution of duties by executive officers, etc., while preparing for a corporate environment which would enable the executive management to take proper degree of risks associated with business. Based on the

company situation and the issues to be solved in the execution of the new medium-term plan "2030 Vision : Shift the Phase" starting from the fiscal year ending March 2025, the areas of experiences and specialized knowledge, which the Nomination Committee considers to be particularly important for the directors, are defined as follows, and the composition of directors would be well-balanced as a whole in consideration of diversity.

Global Company Management Experience

The area of experience and/or expertise required from the perspective of supervising the management of the Group which is operating globally based on the management experiences in a global or multinational business environment.

Financial Expertise

The area of experience and/or expertise required from the perspective of supervising the execution of the financial targets, "Increasing cash generation" and "Improving the financial status" in the medium-term plan.

Risk Management

The area of experience and/or expertise required from the perspective of effective and efficient supervision in identifying and evaluating critical risks that the Group should manage.

ESG / Sustainability

The area of experience and/or expertise required from the perspective of effective and efficient supervision for the initiatives to attain sustainable growth of the Group and contribute to a sustainable society in the medium to long-term such as climate change issues and initiatives to ensure a highly independent and transparent Corporate Governance system for that purpose.

Portfolio management / New Business Development

The area of experience and/or expertise required from the perspective of effective and efficient supervision for the initiatives against "Business structure reform" such as new business development and Portfolio transformation to highly profitable business.

DX / Operational Excellence

The area of experience and/or expertise required from the perspective of effective and efficient supervision for the initiatives utilizing digital technology to quickly execute strategies based on globally integrated information and carry out reform measures for high value-added operations that transcend the boundaries of each function, from procurement and manufacturing to logistics.

Marketing/Commercial

Strategic marketing is needed to develop the business, and this area of experience and/or expertise should be required from the perspective of effective and efficient supervision in implementing the initiatives for "Business structure reform" and customer-oriented "Corporate culture reform".

	Global Company Management Experience	Financial Expertise	Risk Management	ESG / Sustainability	Portfolio management / New Business Development	DX / Operational Excellence	Marketing/ Commercial
Hiroshi Ishino	●					●	●
Jörg Raupach Sumiya	●			●	●		
Kunihito Minakawa	●	●	●				
Shinji Asatsuma	●	●	●				
Eriko Sakurai	●			●	●		
Munehiro Hosonuma					●	●	●

Notes: Up to three most highly expected areas of experiences and specialized knowledge are indicated for each Director. The table does not represent all the specialized knowledge and the experiences possessed by each Director

Corporate Governance

Supervisory Function The status of activities of the Board of Directors and each committee in the FY2024/3 is as follows.

	Board of Directors	Nomination Committee	Audit Committee														
Role	<ul style="list-style-type: none">The Board is responsible for deciding the basic policies for business management and internal control, segregation of duties among Executive Officers and other important management decisions, and supervising execution of duties by Executive Officers.	<ul style="list-style-type: none">The Nomination Committee is in charge of deciding the details of proposals concerning appointment or removal of Directors to be submitted to the General Meeting of Shareholders, and also provide recommendation or advice with regard to candidates for Executive Officers.	<ul style="list-style-type: none">The Audit Committee is responsible for auditing the execution of duties by Directors and Executive Officers, preparing audit reports, and deciding details of proposals concerning appointment, removal or not reappointing the Accounting Auditor.														
Composition as of 27 June 2024	<ul style="list-style-type: none">The Board of Directors is composed of five(5) Independent External Directors and one(1) Director who also serves as an Executive Officer.The Chairperson of the Board is Mr. Hiroshi Ishino, Independent External Director.	<ul style="list-style-type: none">The Nomination Committee is chaired by Mr. Hiroshi Ishino, Independent External Director, and composed of six (6) Directors including the Chairperson, five (5) of whom are Independent External Directors.	<ul style="list-style-type: none">The Audit Committee is chaired by Mr. Kunihito Minakawa, Independent External Director and comprises three(3) Independent External Directors including the Chairperson. ※As "Company with Three Committees", Group will not appoint a full-time Audit Committee member for the time being since the Audit Committee takes the lead in conducting systematic audits through cooperation with the Group Internal Audit, other departments in charge of internal control, and the Accounting Auditor. Furthermore, at least one member of the Audit Committee shall be selected from among persons with considerable knowledge of finance and accounting.														
Number of meetings held	<ul style="list-style-type: none">ten (10) times	<ul style="list-style-type: none">Six (6) times	<ul style="list-style-type: none">Eleven (11) times														
Main items for discussion, consideration and deliberation	<ul style="list-style-type: none">Annual policies and the status of initiatives undertaken by each SBU/GF aiming to achieve the goals of the RP24 medium-term management plan.Sustainability initiatives including<ul style="list-style-type: none">Status of decarbonization, which is our main challenge; and status of Human Capital and DEI initiativesEstablishment of the Sustainable Supply Chain Charter and status of efforts to disseminate the CharterDisclosure of Sustainability informationMeasures for business structure reform and portfolio change into higher profitability businesses including<ul style="list-style-type: none">Expansion of solar glass production capabilityDisposal of a Russian subsidiary owned by Group's joint ventureTo advance the internal control system,<ul style="list-style-type: none">Established "Basic Policies on Corporate Framework of Group Organization and Governance" and revised "Group Entities Management Policies", etc.Operational status of the internal control system and the management status of Group's key entitiesThe new medium-term management plan was approved after having discussions many times at the Board of Directors meetings (six times) and also at the Directors Offline Meeting* of (four times) under the theme of the Group's aspiration, 2030 vision, direction of business and financial strategies.	<ul style="list-style-type: none">Proposal for the appointment of Directors to be submitted to the General Meeting of ShareholdersCandidates to replace External Directors based on their term of officeRevision of the Policies for the Appointment of the Director CandidatesReview of the Skills Matrix of Directors in view of the new MTPCandidates for Executive OfficersSuccession plans for Executive Officers including CEOFeedback to the CEO leadership <div><div>Discussion schedule</div><table><tr><th colspan="2">Main Items for Discussion</th></tr><tr><td>May 2023</td><td>Executive Officers succession planning Revision of the Policies for the Appointment of the Director Candidates</td></tr><tr><td>Jun 2023</td><td>Key Senior Management succession planning</td></tr><tr><td>Sep 2023</td><td>CEO succession planning Desired composition of the Board of Directors</td></tr><tr><td>Nov 2023</td><td>Succession planning for key Executive Officers Search for External Director candidates</td></tr><tr><td>Feb 2024</td><td>Executive Management Structure from FY2025/3</td></tr><tr><td>Mar 2024</td><td>Proposal for the appointment of Directors to be submitted to the GMS Recommendation of EO candidates to the Board of Directors Feedback to the CEO leadership Review of the BOD Skills Matrix items</td></tr></table></div>	Main Items for Discussion		May 2023	Executive Officers succession planning Revision of the Policies for the Appointment of the Director Candidates	Jun 2023	Key Senior Management succession planning	Sep 2023	CEO succession planning Desired composition of the Board of Directors	Nov 2023	Succession planning for key Executive Officers Search for External Director candidates	Feb 2024	Executive Management Structure from FY2025/3	Mar 2024	Proposal for the appointment of Directors to be submitted to the GMS Recommendation of EO candidates to the Board of Directors Feedback to the CEO leadership Review of the BOD Skills Matrix items	<p><Key Management Issues></p> <ul style="list-style-type: none">The Audit Committee confirmed and verified, mainly through interviews, understanding and actions of Executive Officers and others on key management issues, including issues related to the implementation of the medium-term management plan (RP24), as well as risks and opportunities in the business operation.The Audit Committee confirmed the tax risk management system and challenges by hearing reports from the departments in charge, etc., focusing on the effective tax rates and responses to the transfer pricing taxation system while keeping an eye on discussions and deliberations by the Board. <p><Internal Control System></p> <ul style="list-style-type: none">The Audit Committee confirmed and verified the status of the design and operation of internal control systems by hearing reports from the department in charge of internal control and by site visits.The Audit Committee requested the Executive Officers, etc. to further strengthen their efforts in governance and Group internal control over subsidiaries, considering Group's situation with a large number of subsidiaries, joint ventures, and affiliates, and fraud risks.Following verification of audit target area/scope, identified risks and implemented efficient and effective audit through three-way audit in a further collaborative manner. <p><Key Issues in Financial Statements and Auditing></p> <ul style="list-style-type: none">The Audit Committee confirmed and verified through reports from and discussions with the Finance Function and the Accounting Auditor that they had conducted necessary audit procedures for each quarterly and annual financial statement.The Audit Committee verified the relevance of accounting treatments for the accounting events that were the subjects of Key Audit Matters (KAM), including consideration of the impact of the economic environment such as rising interest rates and the future business outlook.The Audit Committee confirmed and verified the appropriateness of audit procedures and KAM text preparation by the Accounting Auditor.
Main Items for Discussion																	
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Secretariat	<ul style="list-style-type: none">The Company Secretary Function	<ul style="list-style-type: none">The Company Secretary Function	<ul style="list-style-type: none">The Audit Committee Office														
Internal experts		<ul style="list-style-type: none">The Human Resources Department															

*Offline BOD meetings as distinct from formal BOD meetings

Corporate Governance

Supervisory Function

The status of activities of the Board of Directors and each committee in FY2024/3 is as follows.

	Compensation Committee														
Role	<ul style="list-style-type: none"> The Compensation Committee is in charge of deciding the compensation policy for Directors and the Executive Officers as well as compensation details of individual Directors and Executive Officers. 														
Composition as of 27 June 2024	<ul style="list-style-type: none"> The Committee is chaired by Mr. Jörg Raupach Sumiya , Independent External Director and is composed of five(5) Directors including the Chairperson, four (4) of whom are Independent External Directors. 														
Number of meetings held	<ul style="list-style-type: none"> Seven(7) times 														
Main items for discussion, consideration and deliberation	<ul style="list-style-type: none"> The individual basic salary for Directors and Executive Officers The indicators related to incentive compensation (performance-linked compensation) paid to Executive Officers, the method for determining the amount to be paid, and the amount to be paid based on the achievement of the indicators in the previous fiscal year. The number of restricted shares allocated to each of Executive Officers (Executive Officers who are appointed pursuant to the terms and conditions of services in Japan shall be granted restricted shares as retirement benefits.) Discussions on revamping the compensation structure for Executive Officers to make it globally competitive and a greater incentive. (The Committee requested an external advisor to provide the market standard data and analysis.) <p>Discussion schedule</p> <table> <tr> <th colspan="2">Main Items for Discussion</th></tr> <tr> <td>May 2023 (Twice)</td><td>Outcome of FY2023/3 annual bonus for Executive Officers FY2024/3 Plan for annual bonus for Executive Officers Outcome of Long Term Incentive Plan 2020-2023</td></tr> <tr> <td>Jun 2023</td><td>The number of restricted shares to be allocated</td></tr> <tr> <td>Sep 2023</td><td>Review of Executive Officers' compensation structure 2023-2026 Long Term Incentive Plan</td></tr> <tr> <td>Dec 2023</td><td>Review of Executive Officers' compensation structure</td></tr> <tr> <td>Feb 2024</td><td>Review of Executive Officers' compensation structure</td></tr> <tr> <td>Mar 2024</td><td>Review of Executive Officers' basic compensation FY2025/3 Plan for Executive Officers' annual bonus</td></tr> </table>	Main Items for Discussion		May 2023 (Twice)	Outcome of FY2023/3 annual bonus for Executive Officers FY2024/3 Plan for annual bonus for Executive Officers Outcome of Long Term Incentive Plan 2020-2023	Jun 2023	The number of restricted shares to be allocated	Sep 2023	Review of Executive Officers' compensation structure 2023-2026 Long Term Incentive Plan	Dec 2023	Review of Executive Officers' compensation structure	Feb 2024	Review of Executive Officers' compensation structure	Mar 2024	Review of Executive Officers' basic compensation FY2025/3 Plan for Executive Officers' annual bonus
Main Items for Discussion															
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Dec 2023	Review of Executive Officers' compensation structure														
Feb 2024	Review of Executive Officers' compensation structure														
Mar 2024	Review of Executive Officers' basic compensation FY2025/3 Plan for Executive Officers' annual bonus														
Secretariat	<ul style="list-style-type: none"> The Company Secretary Department 														
Internal experts	<ul style="list-style-type: none"> The Human Resources Department 														

Executive Function

Fourteen(14) executive officers with diverse backgrounds in terms of international experience, gender, age, etc. are responsible for the business execution of the NSG

	Executive Officer	Management Committee
Role	Business execution of NSG Group	Management Committee lead the Company's business operation and oversees the execution of businesses in order to realize the policies and targets set forth by the Board of Directors efficiently and appropriately.
Composition as of 27 June 2024	1 Representative Executive Officer(Chief Executive Officer(CEO)) and 13 Executive Officers	The Management Committee is composed of Executive Officers with Senior Executive Officers and above, other Executive Officers who supervise major businesses and functions as permanent members.
Number of times held	—	14

	Sustainability Committee	Strategic Risk Committee
Role	Sustainability Committee builds the sustainability strategies, presides over all of the Group's sustainability related activities, and ensures effective communication with various Stakeholders.	Strategic Risk Committee periodically reviews policies, strategies and frameworks concerning risk management throughout the Group, and appropriately take into account the results of such review in forming the organization strategy and goals, in order to promote efficiency of the Group's business management and to enhance the medium and long-term corporate value.
Composition as of 27 June 2024	<ul style="list-style-type: none"> Sustainability Committee is composed of CEO and other Executive Officers, Heads of relevant GFs (Group Functions), and Heads of SBUs (Strategic Business Units). Sustainability Committee is chaired by CEO or a person who is nominated by CEO 	<ul style="list-style-type: none"> Strategic Risk Committee is composed of CEO and other Executive Officers; Heads of relevant GFs (Group Functions); and Heads of SBUs (Strategic Business Units). Strategic Risk Committee is chaired by CRO.
Number of times held	3	3

Corporate Governance

Board Effectiveness Evaluation

The Company started an annual evaluation process for the Board effectiveness since the fiscal 2016, in order to further and constantly improve performance and effectiveness of the Board of Directors and Nomination, Audit and Compensation Committees.

In this process the Board confirms the progress of the ongoing priority implementation items as it relates to the issues previously identified, creates an additional improvement plan addressing the newly found issues and then combines and integrates the issues into priority implementation items for regular monitoring to continuously aim for enhancement of the effectiveness of the Board as a whole.

The entire process was led and supervised by the Independent External Directors under the leadership of the Chairman of the Board to ensure sufficient adequacy and independence.



Initiatives for the Priority Implementation Items for the fiscal 2024 (Review)

As for the Priority Implementation Items for the fiscal 2024, we believe that certain progress has been made through various initiatives and discussions at meetings of Independent External Directors, Board, Nomination Committee, etc.

FY2024/3 Priority Implementation Items	Initiatives Undertaken
<p>① In order to further improve supervisory functions, deepen discussions on the roles that the Board and Independent External Directors should play and foster common understanding among Directors using meetings of Independent External Directors and offline mtgs.</p> <p>② Discuss an ideal form/method of monitoring by the Board, and after sufficiently coordinating with the Executive Team, perform monitoring in a way that will support speedy execution of initiatives by the Execs.</p>	<ul style="list-style-type: none"> As a follow-up to the evaluation of the effectiveness of the Board of Directors for FY2023/3, multiple discussions among External Directors were held at the Independent External Directors Meeting (five times in total) with the cooperation of Board Advisors, Inc., the External organization responsible for the evaluation of the effectiveness of the Board of Directors for FY2023/3 Drew up the "Board Charter" for each Director to perform oversight based on common understanding, and reviewed the Board operation. External Directors identified "key management issues" and requested the Executive members to present monitoring items. (The detailed discussion process and the contents of the Board Charter are as next page)
<p>③ Mainly at the Nomination Committee meetings, deepen discussions on the skills/experiences and diversity necessary for the Board, and work to improve the appointment process of Directors.</p>	<ul style="list-style-type: none"> At the meetings of Independent External Directors and the Nomination Committee, skills/experiences and diversity necessary for the Board were discussed towards implementation of the new MTP. Discussion was held at the Nom. Com. Based on widely shared candidate information aiming to increase transparency of the appointment process in the succession of External Directors.
<p>④ Towards sustainable improvement of corporate value, deepen discussions on the medium- to long-term strategies that the Group is aiming for, and formulate a new medium-term management plan based on those discussions.</p>	<ul style="list-style-type: none"> In preparation for the new medium-term management plan, discussions were held multiple times at Board(6 times) and Offline meetings that are distinct from formal Board (hereafter referred to as "Directors Offline Meetings")
<p>⑤ Strive to enhance the sophistication of the Board operation in order to stimulate substantive discussions.</p>	<ul style="list-style-type: none"> Initiatives were undertaken to improve the Board operation, including briefing prior to the Board mtgs, enhanced information sharing with External Directors, introduction of rules for the Board materials.

Corporate Governance

In particular, for the purpose of (1) “fostering common understanding among directors regarding the roles to be played by the Board and Independent External Directors,” meetings of Independent External Directors was held and Independent External Directors discussed from October 2023 to April 2024.

Schedule	meeting	Theme
Oct 2023	Meeting of Independent External Directors	Roles and Legal Responsibilities of Independent External Directors in a Company with Three Committees
Dec 2023		Roles and Legal Responsibilities of Independent External Directors in a Company with Three Committees
Jan 2024		Roles and responsibilities of the Board of Directors
Mar 2024		Roles and responsibilities of the Board of Directors
Apr 2024		Board composition and culture
May 2024	Board of Directors Meetings	Review of discussions and development of Board Charter
		Development of Board Charter

Through the above discussion, the “Board of Directors Charter” was developed and adopted by the Board of Directors in May 2024, setting forth the basic stance and expectations which are necessary for the Board of Directors to address to the current situation of the Group, with the aim that each Director will exercise his/her supervisory function based on a common understanding.

The “Board of Directors Charter” and how to use it can be found on next page. Going forward, the Board of Directors will strive to ensure that each Director fulfills the expected supervisory functions and roles in accordance with the “Board of Directors Charter”. Also, the Board of Directors will make effective use of this “Board of Directors Charter” in the process of selecting candidates for the Board of Directors and in the evaluation of the effectiveness of the Board of Directors in assessing their endorsement of and commitment to the aims of this Charter. In addition, the Board of Directors has reviewed the operation of the Board of Directors by reorganizing the positioning of the Board of Directors Meeting and Directors Offline Meeting to focus on discussion of “Key management issues”.

Positioning of the Board of Directors Meeting and the Directors Offline Meeting

- The Board of Directors Meeting is positioned as meetings to identify and focus discussion on “Key management issues,” and in principle, monitoring (oversight) and discussion of “Key issues” are conducted at every the Board of Directors Meetings.
- Directors Offline Meeting is positioned as meetings for deepening understanding of the status of initiatives in each business unit and for exchanging opinions between Directors and Executive Officers, and the number of Directors Offline Meeting held and agenda items expanded.

As “key management issues” for the FY2025/3, issues related to cash generation and strengthening of the organization and human resources were identified through discussions among the Independent External Directors.

Effectiveness Review Process in the fiscal 2024

For the annual evaluation for the fiscal 2024, all Directors were evaluated through Questionnaire survey (four-grade evaluation and open-ended questions) and Individual follow-up interviews conducted by the Board of Directors Secretariat. Questions were asked about the composition of the Board of Directors and each committee, the operational status, agenda setting, deliberation status, role fulfillment, communication the Executive team, and material agendas requiring further in-depth deliberation. Based on the responses and opinions of each Director, Independent External Directors discussed, and the Board evaluated the effectiveness of the Board of Directors and each committee.

Board Priority Issues and Board Priority Implementation Items in the fiscal 2025

Based on the above process, the Board of Directors have confirmed the following Board Priority Issues and Board Priority Implementation Items in the fiscal 2025. Through these efforts, the NSG Group will continue to strive to further improve the effectiveness of the Board of Directors.

FY2025/3 Board Priority Issues	FY2025/3 Board Priority Implementation Items
More in-depth deliberation on key management issues	<ul style="list-style-type: none"> • Further improvement of the supervisory function of BOD as a monitoring board through implementation of “Basic Stance” and “Expected Conduct” by each Director as provided by the “BOD Charter”. • Monitoring (oversight) and focused discussion of identified “key management issues” and providing appropriate support to the management team as the situation requires (enhance decision-making, make suggestions, etc.)
Enhancement of responsive capability and speed of the Executive Team to solve management issues	
Further improvement in the process and contents of the Board agenda setting, time allocation, and preparation of papers	<ul style="list-style-type: none"> • Further enhancement of the Board meeting operation to contribute to invigoration of discussions at the Board meetings.
Assuring sufficiency of personnel information incl. performance appraisal to be shared in the course of executive succession or recommendation agenda	<ul style="list-style-type: none"> • Implementation of initiatives contributing to the enhancement of the Executive succession and the candidate recommendation process.
Reviewing Current Management Incentive Plan with a view to effective executive incentivization when addressing and delivering key management issues.	<ul style="list-style-type: none"> • Continued and more in-depth discussions with a view to more appropriate Management Incentive Plan in terms of incentivization.

Corporate Governance

Board of Directors Charter

Based on the priority issues identified in the Board Effectiveness Evaluation, the Company established the “Board of Directors Charter” in May 2024, following discussions at the Independent External Directors Meeting.

The “Board of Directors Charter” defines the basic stance and expectations which are necessary for

the Board of Directors to address to the current situation of the Group, with the aim that each Director will exercise his/her supervisory function based on a common understanding.

Board of Directors Charter

Purpose

- The purpose of the Charter is to continuously improve the effectiveness of the Board of Directors by specifying among others, the basic stance and expectations of the Board of Directors in fulfilling its roles and duties as described in Article 10 of NSG Group Corporate Governance Guidelines which are necessary to address the current situation of the Group, thereby enabling Directors to perform their supervisory function based on the shared understanding of such stance and expectations.

Basic stance

- Oversight by the Board of Directors of the Group is not limited to checking the progress of management targets prepared by the management team (“monitoring”), but also involves proactively identifying material management issues on the basis of mutual trust with the management team, setting direction for resolving such issues in full cooperation with the management team, and providing appropriate support while being mindful of the separation of execution from supervision (“proactive oversight”).

Expectations of Board of Directors

- Identify issues that have a critical impact on the Group's medium-to long-term corporate value and sustainable growth and set direction for resolving such issues.
- Quantitatively monitor the status of initiatives to address the issues identified as material management issues on a regular basis.
- Support or control the Executive team's decisive decision-making for creating value for the future, by taking into account the overall picture of management risks and opportunities as well as changes in their conditions in a timely and appropriate manner.

Expectations of Directors

- In order to fulfil the purpose of the Charter, each Director is expected to exercise his/her oversight function in accordance with the basic stance and expectations of the Board of Directors described above, and to perform his/her duties with full awareness of the following points:
 - Actively and interactively engage in discussions by providing constructive opinions with respect, while making the most of his/her expertise and experience and taking a bird's-eye view of the Group's material issues and other management issues.
 - Always strive to improve their ability to appropriately assess management risks and opportunities as well as changes in society, and encourage risk-taking by the Executive team when appropriate while being fully mindful of the balance between support and control functions of supervision.
 - Make efforts to foster an appropriate relationship of trust with the management team based on the spirit of mutual respect while maintaining tension in accordance with the separation of execution from supervision, by taking advantage of communication opportunities both inside and outside the meetings of the Board of Directors.

Ideal Board Culture

- Create a forum for making decisions to resolve management issues that will lead to medium-to long-term improvements in the Group's corporate value, and carrying out discussions from a broad perspective with a view to contributing to the expansion of the shared value of the stakeholders, in accordance with the Group's guiding principles (“Our Vision”).
- Based upon the understanding that sound corporate governance is built on mutual trust between the supervisory and executive functions, maintain a milieu in which uninhibited, open and constructive discussions take place by actively utilizing communication opportunities both inside and outside the meetings of the Board of Directors.
- Continue to disseminate the above expectations and ideal culture of the Board of Directors by taking advantage of such opportunities as the annual Board effectiveness evaluation.

Compensation for Director and Executive Officers

1. Compensation Policy for Executive Officers

Compensation System and Compensation Composition Ratio

Compensation packages for the Executive Officers principally consist of basic salary, Management Incentive Plan (annual bonus) and Long- term Incentive plan.

The Group operates a global grading structure across the Group, and management grade is determined based on job evaluation by the Group common scale using the Korn Ferry/HAY management grade methodology, a globally recognized job evaluation methodology. Management grade determines the maximum quantum levels for participants in both the annual and long-term incentive structures.

a. Compensation System

Objectives

- To ensure that packages of employment terms and conditions are market competitive and designed in such a way as to attract, retain and motivate Executive Officers of the highest caliber on a worldwide basis in an international business.
- To ensure that each individuals basic salary and incentives are aligned with the performance of the Group and the interests of shareholders, as well as reflecting the commitment and achievements of the individuals concerned.

Composition and Details

Fixed salary

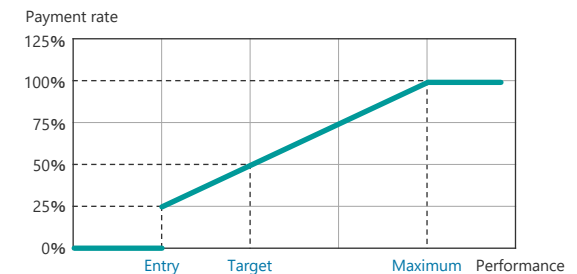
Basic salary

- Salaries are reviewed annually and are broadly aligned with market medians for a global business.
- In determining what are the appropriate market rates, account is taken of turnover, number of employees and the complexity and breadth of internationalization.
- In reviewing salaries, account is also taken of the scope and responsibilities of the role, the performance of the individual, the progress the Company is making against its targets and pay increase rate in market medians.

Performance-related compensation

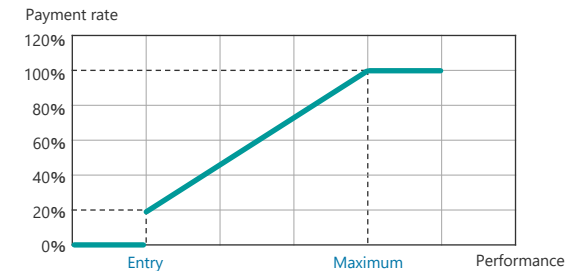
Management Incentive Plan (annual bonus)

- Assessed against the achievement of annual performance indicators which are mainly financial.
- Aligned to NSG Group's Medium-Term Plan
- Payment Maximum levels: Ranging between 40% and 125% against each individual's basic salary dependent upon the management grade
- $\text{Payment Level} = \text{Maximum payment amount} \times \text{Payment rate of Performance measures}$
- A Gate mechanism operates for the plan, which is based on a minimum level of Net Income that must be reached, as an affordability threshold before considering payment based on achievement against the different performance measures.
- For each performance measure, set the minimum performance level ("Entry") for ensuring that the business is meeting the minimum standard of financial performance, "Target" and a maximum value for stipulating the upper limit of annual bonus payments "Max", in line with the annual budget for the financial year.



Long- term incentive plan

- Assessed against the achievement of long-term performance indicators over a three-year period
- Issued annually
- Payment Maximum levels: Ranging between 50% and 150% against each individual's basic salary dependent upon the management grade
- $\text{LTIP Payment} = \text{Maximum payment amount} \times \text{Payment rate of Performance measures} \times \text{Share price movement rate}$
- For each measure, "Entry" is set in such a way to ensure that the business is meeting the minimum required performance level and the "Maximum" point on the scale has appropriate stretch.
- Require the purchase of NSG Shares by using part of the cash award from the plan to lead to further alignment of the Executive Officers with shareholders, allowing Executive Officers to continue to be motivated to help build shareholder value
- Shareholding targets set for Executives
- Plans contain Malus (ability for the value of award to be reduced after it has been granted but before it has vested) and Clawback clauses (ability for the Group to require the participants to repay the value they received after the award has vested). The Group can exercise these provisions if one of a list of trigger events occurs. Trigger events include the Misstatement of results, an error that causes an award to be paid at too high a level, a serious illegal act, or a material breach of the Group Code of Ethics.



Stock Compensation

- Restricted shares are issued annually to some Executive Officers under Japanese employment terms as a retirement saving plan.

Compensation for Director and Executive Officers

b. Compensation ratio

The ratio of basic salary and incentives is, rather than specifically and equally applied, set according to individuals' management grades.

Note: For clarification, the above diagram includes only base salary plus annual and Long-term incentive plan compensation, no additional benefits are included. In addition, the impact of the share price movement element of the Long-term incentive plan is not taken into account.

CEO's compensation ratio

In the case that all criteria of performance-linked compensation have not been reached

← Fixed salary →

Basic salary
100%

In the case that performance-linked compensation have been reached all maximum (maximum payment of performance-linked compensation)

← Fixed salary →

Basic salary
27%

← Variable compensation →

Management incentive Plan
(annual bonus)
33%

Long-term incentive plan

40%

Half of net LTIP proceeds is used to purchase NSG shares

Targets of performance measures for performance-linked compensation

<1> FY2025 Management Incentive Plan (annual bonus)

a. Performance measures and weight

Element	CEO, CFO and Chairperson of the Company	Executive Officers other than CEO, CFO and Chairperson of the Company, who are mainly responsible for specific Global SBUs	Executive Officers other than CEO, CFO and Chairperson of the Company, who are mainly responsible for specific group functions	Reasons
Group Management Operating Profit	50%	35%	35%	Ensure alignment with delivery of the target numbers assigned to Group operating profit and cash flow which are the financial performance indicators specifically important to the annual budget
Group Free Cash Flow	50%	35%	35%	
Global SBU Management Operating Profit	—	In relation to the results of specific SBUs they are responsible for, constituting 15% in total	In relation to the results for every of SBU of the Group, constituting 15% in total	For Executive Officers who are mainly responsible for specific SBU or group function, ensure working together to achieve the targets numbers of the entire group as an Executive and also exercising the leadership within each SBU/Function to deliver annual target numbers of each SBU
Global SBU Cash Flow from Operations	—	In relation to the results of specific SBUs they are responsible for, constituting 15% in total	In relation to the results for every SBU of the Group, constituting 15% in total	

Note: Group Free Cash Flow used in the above table represents the net debt movement arising as a consequence of the operating and investing activities in the period. It includes transactions that have impacted the Group's net debt even where there has been no cash movement through an NSG Group bank account, and is therefore different to the Free Cash Flow as derived from the sum of operating and investing activities included within the Group's consolidated statement of cash flows. Group Operating Profit shown in the above table is defined as being operating profit stated post-amortization before exceptional items on a consolidated basis plus share of income from the Cebrace JV. The actuals for these KPIs are the subject-matter of review and confirmation by the Compensation Committee.

b. Determination of Management Incentive Plan (annual bonus) Payment Level

Payment Level

=

Maximum payment amount

×

Payment rate of Performance measures

Compensation for Director and Executive Officers

<2> Long-term incentive

a. Performance measures, weight and reasons for selected the measures of plans currently in operation

- i. **The Plan commencing in FY2023** (Target period : FY2023, FY2024 and FY2025)
 ii. **The Plan commencing in FY2024** (Target period : FY2024, FY2025 and FY2026)

Performance Measures	Ratio <i>	Ratio <ii>	Reasons for selected the measures
EPS	75%	60%	Two performance measures ensure clear link with the Medium-Term Plan, incentivizing executives to improve restoration of financial stability and enhance shareholder value.
Free Cash Flow	25%	40%	

b. Determination of LTIP Payment Level

$$\text{LTIP Payment} = \text{Maximum payment amount} \times \text{Payment rate of Performance measures} \times \text{Share price movement rate}$$

The share price movement rate is a coefficient that is linked to the price movements of the Company's share price for the three-year period covered by each plan, and is adjusted based on the price movement of the monthly average share price in the month before the start of the plan and the monthly average share price of the last month of the plan. The share price movement rate is subject to an upper and lower limit of 20%.

2. Compensation Policy for Independent External Directors

Objectives

- To ensure that independent external directors can adequately and effectively fulfill their supervisory roles
- To ensure that they have the capability and experience required to fulfill this role

Compensation level

- Set at the appropriate level based on comparisons with other companies using benchmark data provided by specialist external advisers.

Compensation Structure

- Only Basic salary
- Not eligible for Management incentive plans (annual bonuses) and Long-term incentive plans
- Independent External Directors receive additional reward if they act as Chair at either the Board or any of the Committees.

3. Amount of Compensation for Directors and Executive Officers for FY2024

Category	Headcount	Amount of Compensation (million yen)							Total
		Basic Salary	Performance-linked compensation			Non-monetary compensation			
			Annual Bonus	Long-Term Incentive Pay	Total	Stock Compensation	Other Benefits	Total	
Directors who do not concurrently serve as executive officers (External Directors)	6	76	-	-	-	-	-	-	76
Executive Officers	18	629	182	0	182	56	26	82	893

Notes

1. Amount of compensation for Executive Officers includes compensation paid to executive officers by the Company's subsidiaries.
2. Amounts shown relate to the periods for which the office of Director and Executive Officer was held.
3. Directors and Executive Officers include those who retired and those who assumed office during the fiscal 2024.
4. The amount shown as Performance-linked compensation in the table are the payments associated with the Annual Bonus for the fiscal 2024 and with the Long-Term Incentive Plan covering the three financial years from April 2021 to March 2024.
5. Stock compensation relates to the cost of allocating a total of 83,000 restricted shares to Executive Officers under Japanese employment terms.
6. Other Benefits include pension fund contributions, healthcare provision and automobile costs and so forth.

Message from Board Chairperson



Independent External Director
Chairperson of the Board /
Chairperson of Nomination Committee
Hiroshi Ishino

Board Composition and Chairperson's Role

As a monitoring Board, the Group's Board of Directors promotes the separation of execution from supervision, establishes medium-to long-term fundamental management policies and goals for the Group, makes important decisions related to these policies and goals, and oversees the Management team's business execution.

In accordance with "NSG Group Corporate Governance Guidelines" which stipulates that the majority of the Board of Directors shall consist of Independent External Directors, five out of the six current Directors are Independent External Directors. In addition, the Board of Directors has been chaired by Independent External Directors since 2013. The role of Independent External Directors has thus become extremely important.

Furthermore, the current Board of Directors boasts a well-balanced composition, featuring diversity in gender, international experience, and professional backgrounds, and a variety of skills derived from extensive experience. This diverse composition enables the Board to provide a range of perspectives and to engage in vigorous, substantive discussions with the Executive team. Ensuring diversity and effective skills within the Board will remain a crucial theme. We will continue to prioritize and discuss these aspects primarily in the Nomination Committee and promote them further within the Board.

The Chairperson's role is crucial in leading our highly independent Board which embodies diversity and a variety of

skills. Recognizing the importance of the role, we have recently discussed and confirmed the Chairperson's responsibilities at the Board level.

As part of such role of the Chairperson of the Board, I regularly arrange meetings with the CEO, Mr. Hosonuma, to exchange views. While fully recognizing and respecting the CEO's ultimate responsibility for the Group's operations, I also share my opinions and perspectives as an Independent External Director, seek his views on future management policies, and engage in frank discussions. In this way, I strive to build and maintain a constructive relationship with the CEO which at times operate as reliable sounding board for him, while maintaining an appropriate level of tension.

On the other hand, fostering an appropriate culture in the boardroom is critical. To this end, it is also important to build a relationship of trust among Directors and between Directors and Executive Officers that encourages frank discussions and healthy challenge. We also set up Directors Offline meetings that are separate from formal Board meetings, as well as opportunities for information sharing among Independent External Directors as necessary, to deepen discussions on material management issues. I believe these opportunities are also meaningful for building a constructive relationship.

I am fully committed to continuing to fulfill my role as the Chairperson of the Board of Directors.



Message from Board Chairperson

New Medium-Term Plan “2030 Vision : Shift the Phase”

Over the three years starting from the fiscal year ended March 31, 2022, the Group made concerted efforts to enhance business performance and financial strength under the previous Medium-Term Management Plan (MTP) “Revival Plan 24”.

Despite a rapidly changing business environment, characterized by rising costs due to global inflation and increasing interest rates in Europe and the U.S., the Group met its Equity Ratio and Free Cash Flow targets among the four financial targets. That said, these results are not taken as sufficient. The Group fell short of its Operating Profit Margin and Net Income targets, making the improvement of profitability an urgent priority for the Group. In light of the Group’s performance and financial situation, the Board of Directors regrettably decided to not declare common dividends for the fiscal year ended March 31, 2024. This nil declaration has continued for some time long and we the Directors take this situation very seriously.

Reflecting on the previous MTP and recognizing the issues to be addressed, the CEO, Mr. Hosonuma and other Executive Officers and Independent External Directors engaged in a series of in-depth discussions on the future of the Group and the vision for 2030 as part of developing the new MTP. Over the course of about a year, we had these discussions at six Board meetings and four Directors Offline meetings, culminating in creation of the new MTP, “2030 Vision : Shift the Phase” with approval of the Board in March 2024. We believe that the through and meticulous discussions have identified the direction the Group should take in the medium-to long-term.

Under the new MTP, the Group will focus on enhancing profitability, cash generation capability, and equity ratio to realize our 2030 goal of “transitioning to the next phase and positioning ourselves as vital contributors to the development of a sustainable society”. The Board of Directors will supervise and strongly support the Executive Officers in the execution of their duties to achieve the new MTP which was established as the fundamental management policy at the Board.



Development of “Board of Directors Charter” to Improve Board Effectiveness

Through the Board Effectiveness Evaluation for the fiscal year ended March 31, 2023, and also in light of a third-party evaluation, the Board of Directors identified “fostering a common understanding among the Directors regarding how the Board supervision should be performed” as one of our priority implementation items.

Based on this priority item, we held five meetings of Independent External Directors during the fiscal year ended March 31, 2024 to engage in in-depth discussions on “the role to be played by the Board of Directors and Independent External Directors” which is a fundamental theme of corporate governance.

Through our discussions, we developed “Board of Directors Charter” which specifies among others, the basic stance and expectations that the Board of Directors must fulfil to address the current situation of the Group. We are pleased to have created a charter that will serve as a foundation for further improvement of our effectiveness as a monitoring Board. In the process of developing the Charter, we also had in-depth discussions on the operation of the Board of Directors. It was confirmed that, in addition to deciding on fundamental

management policies and establishing internal control systems, the Board shall proactively identify material management issues and focus on monitoring their progress to set a clear path for resolution, while being mindful of the separation of execution from supervision. Starting from the fiscal year ending March 31, 2025, we have organized an agenda item for each Board such that “Review of (specified) Material Management Issues” be covered on each occasion. These material management issues were first identified by Independent External Directors in light of the Group’s business environment and confirmed by the whole Board of Directors as such through discussion with CEO. Now the specific initiatives for resolving each such issue have been clarified under the CEO’s leadership, so the Board aims to monitor progress and engage in thorough discussions to contribute to the resolution of these issues.

There is no end to the efforts to improve corporate governance further beyond. As led by the “Board of Directors Charter”, each Director is committed to fulfilling their expected supervisory function and role, and continuously enhancing the effectiveness of the Board of Directors.

Dialog with External Directors

Shinji Asatsuma × Eriko Sakurai

Independent External Director/
Nomination Committee Member/
Audit Committee Member/
Compensation Committee Member

Independent External Director/
Nomination Committee Member/
Compensation Committee Member



Could you describe the discussions at the Board that took place during the development of the new medium-term plan “2030 Vision: Shift the Phase”?

Eriko Sakurai I believe the discussion process for creating the medium-term plan (MTP) was very effective. We dedicated considerable time to discussions, not only during regular Board meetings but also at several Directors Offline meetings which are distinct from formal Board meetings. I joined the MTP discussions immediately after being elected as a new External Director. The Executive team responded to various data requests from External Directors, including myself, to the best of their ability, which enabled us to engage in in-depth, detailed discussions.

From the early stages, the draft plan featured both the Group’s long-valued perspectives and new ones we aim to adopt. This clearly demonstrated the Executive team’s determination to re-consider the Group’s “envisioned future state” from the ground up, leading to substantive, rather than superficial, discussions at the Board.

Shinji Asatsuma Our approach was indeed very effective. We began by discussing the envisioned state we intend to achieve by 2030 and developed the MTP by backcasting from this vision. I think few companies engage in such thorough discussions

among Board members, also utilizing opportunities like Directors Offline meetings, to formulate the MTP.

Through these discussions, we established our 2030 Vision as “shift our company’s phase”, aiming to drive forward the reforms initiated under the previous MTP, “Revival Plan 24”, to transform ourselves into a highly profitable business group. We also clarified the concept of “focusing on our strengths, glass and related technologies”, with a view to contributing to the development of a sustainable society by fully utilizing our strengths. I am confident that this vision and concept will serve as a foundation for the Group’s medium-to long-term growth.

On the other hand, given the Group’s current profitability and financial base, it is imperative that we accelerate efforts to resolve immediate issues. While our new MTP sets financial targets for the year ending March 2027, focusing on enhancing profitability, increasing cash generation, and stabilizing our financial base, improving short-term profitability and restoring financial strength are urgent priorities. Addressing these issues requires close monitoring of capital and investment efficiency.

Eriko Sakurai Regarding the financial targets, we have set levels that are challenging yet realistic and within reach, based on the Group’s current status and immediate issues. This reflects our strong intention to lead the Group decisively towards greater profitability and a strengthened financial foundation. The Executive team has also been attentive to the internal communications of the new MTP, making sure that all employees worldwide understand the content, including visual images in the slides. The CEO, Mr. Hosonuma, organized an occasion to share the thoughts and considerations behind the MTP with all Executive Management members. I believe his determination as a leader, now in his second year as CEO, was fully acknowledged by senior management.

I am pleased with how the overall content of the MTP turned out as a high-level plan. Moving forward, it is essential for the CEO and SBU/Function Heads to develop specific action plans that align with the strategic direction of the MTP and execute them accordingly. As the Board of Directors, we will strongly support this process.

Dialog with External Directors

The new MTP establishes four “D”s as its strategic pillars.

In light of these four “D”s, could you elaborate on the Group’s strengths and challenges in achieving the MTP?

Shinji Asatsuma The Group’s strength lies in “Diverse Talent”, one of the four “D”s outlined in the plan. We actively promote diversity across nationality, gender, and other aspects. Our employees are characterized by sincerity and diligence in their work. Moreover, a growing number of new members from diverse backgrounds are joining the Group globally, enriching our culture of inclusivity. Leveraging this remarkable “Diverse Talent” in our business operations and connecting it to the Group’s success will be crucial to achieving the MTP.

Eriko Sakurai The Group indeed has many talented individuals and truly embodies diversity as an organization. “Diverse Talent” in Executive Management is also a significant strength. Linking the Group’s diversity with its overall performance will be essential and a key challenge to be addressed.

The Group also offers many products which contribute to

“Decarbonization” and address other societal issues. Regarding “Business Development”, we are developing products and technologies such as glass for solar panels, which directly relates to decarbonization, various types of double-glazing glass, and increasingly sophisticated automotive glass for enhanced safety and the shift to EVs. These new solutions and technologies allow us to contribute to the development of a sustainable society and create high added value. This capability is our strength and a source of pride, also representing an opportunity for business expansion.

Shinji Asatsuma Given the significant CO₂ emissions associated with our glass production process, reducing our carbon footprint is a material issue. We are implementing various “Decarbonization” measures such as using hydrogen and biofuels in the production process and promoting innovative projects.

A notable recent development is the establishment of a green hydrogen manufacturing plant at our UK site. We need to drive decarbonization efforts steadily across our entire supply chain.

On the other hand, the accelerating global movement toward carbon neutrality presents substantial business opportunities for our products that assist society’s decarbonization. The Board of Directors is committed to supporting the Executive team’s initiatives to expedite progress in both “Business Development” and “Decarbonization,” aiming to address societal challenges while enhancing our corporate value.

Eriko Sakurai Given the Group’s history of major business integration, one of our key challenges is enhancing global management. The current state of information integration and the use of digital technology is still insufficient, which is precisely why we have designated “Digital Transformation” as one of our four strategic pillars, the four “D”s. To ensure the Group’s medium-to long-term growth, advancing DX initiatives is essential. While this endeavor will require a certain level of investment and time, the Board of Directors is committed to overseeing and supporting the Executive team’s efforts to achieve steady progress in the MTP initiatives.



Dialog with External Directors

Could you provide details about discussions held regarding the “roles and responsibilities to be fulfilled by the Board of Directors” following the BOD Effectiveness Evaluation for FY2023/3 during the Independent External Directors meetings, and the background behind the adoption of the “Board of Directors Charter”?

Shinji Asatsuma This is my third year as External Director. Initially, I had the impression that the Company's Board of Directors was delving quite deeply into execution matters. Then, I realized through exchanges of opinions with other External Directors that this is because each External Director is seriously considering the future of the Company and is committed to improving business performance and corporate value, which I consider is a valuable Board of Directors culture aligned with the Company's current situation. Very vigorous discussions are held at the Board of Directors, where Independent External Directors make up the majority as per the NSG Group Corporate Governance Guidelines, while Executive Officers listen to the opinions of Independent External Directors very earnestly and are keen to incorporate them into the execution of management.

Eriko Sakurai At the outset of my tenure as External Director, I also noticed that the Company's Board of Directors spend a significant amount of time discussing matters closely related to the Executive team. I believe that one of the strengths of our Board lies in its environment conducive to candid discussions among External Directors without hesitation, thanks to its size and atmosphere.

Shinji Asatsuma In the meantime, a third-party organization indicated in the Board Effectiveness Evaluation that there are perception gaps concerning “the Board of Directors supervision function of the Executive team” between Internal Directors and External Directors as well as within External Directors. In response, we decided to hold an Independent External Directors meeting to address this issue. It was very meaningful that we were able to have discussions on the “Board supervision” as considered by each Independent External Director and deliberate on the further enhancement of the Board Effectiveness.

Eriko Sakurai I agree. Through comprehensive discussions on corporate governance during the Independent External Directors meetings, we recognized that each Independent



External Director is deeply committed to the growth of the Group businesses, and based on such understanding we were able to discuss thoroughly the roles to be played by the Board of Directors.

I believe that engaging in fundamental discussions about the “roles and responsibilities of the Board of Directors” as we did this time is a meaningful effort towards further improving the Board effectiveness.

Partly with the intention of carrying forward the outcomes of such discussions to the future Board of Directors, we developed the “Board of Directors Charter”. I believe it was beneficial to clearly state in the Charter not only the “basic stance” that the Board of Directors must maintain and “expectations” for the Board but also the culture unique to our Company that we should aspire to foster.

The way the Board of Directors operate will vary depending on the environment surrounding each company. Since we have been discussing the ideal state of the Board of Directors in light of the Company's ongoing situation, we have been able to

establish the Board of Directors Charter suitable for the current state of the Company. Furthermore, we anticipate that the Charter will be revised and evolve into an upgraded version along as the situation surrounding the Group changes.

Shinji Asatsuma As Ms. Sakurai pointed out, it is important to develop a Board of Directors culture suitable for the Group. I believe the “unique” character of the Company represented in the Charter may be “proactive oversight” as a “basic stance” of the Board. More than passively monitoring the execution of business by receiving reports from the Executive team, we defined the Board of Directors meetings as the opportunities for intensive discussions on “material management issues” and even reviewed the Board's operational procedure as well as the Board agenda. I believe this was the response approach “unique to the Company” as we had to address current management issues urgently.

Dialog with External Directors

In the process of discussing “roles and responsibilities to be fulfilled by the Board of Directors”, deliberations lead to Independent External Directors discussing and identifying the “material management issues” of the Group. Could you explain its background and how the Board of Directors monitor in the future?

Eriko Sakurai It is beneficial to have an opportunity to engage in discussions exclusively among Independent External Directors. Through such discussions, we reached the consensus that it is important to summarize what we consider the challenges faced by the Company and agree on their priorities with the Executive team. This is why we discussed and compiled a list of “material management issues” to be focused by the Board of Directors.

Subsequently, all five Independent External Directors exchanged views with Mr. Hosonuma about the “material management issues” we identified and requested that milestones should be presented for each key issue.

Mr. Hosonuma immediately recognized the necessity and instructed each CxO to develop concrete initiatives and milestones. All of us were greatly impressed by his swift response and excellent leadership. Soon after, Mr. Hosonuma and each CxO proposed concrete initiatives and milestones, which were endorsed by the Board of Directors.

Shinji Asatsuma I agree. During our Board of Directors meetings, I noticed several instances where there was a discrepancy in understanding the importance and priorities of management issues between Independent External Directors and the Executive team. Therefore, I believe it was extremely meaningful that the Board of Directors were able to clarify the themes to be focused by the Board of Directors.

Eriko Sakurai What was even better was that a “material issue review” was included in the Board agenda for each meeting, and a specific schedule for discussing “material management issues” was also presented to the Board. I was impressed by the Executive team’s swift response. Their seriousness was evident, which also helped to strengthen the relationship of trust between the Board of Directors and the Executive team.

Currently, we are monitoring and discussing each key issue at every Board of Directors meeting according to this schedule. I am hopeful that a right direction will be found for resolving these issues through in-depth discussions.

Shinji Asatsuma Now, I feel that the Company’s Board of Directors is making positive strides since a framework has been established in which External Directors, mandated by shareholders, communicate management issues to the Executive team; the Executive team will develop and present initiatives to solve those management issues to the Board; and the Board closely monitors the progress of those initiatives. Going forward, I believe it is crucial to operate within this framework with a strong sense of commitment as External Directors. I am convinced that it is the mission of our Board of Directors to oversee the progress of various initiatives to resolve management issues, engage in discussions to resolve management issues, and ultimately achieve an enhancement of corporate value.



Risk Management



Senior Executive Officer
Chief Risk Officer (CRO) and Assistant CFO

Masaki Kambayashi

NSG Group is a truly international company having abundant talents and diversified community with geographical breadth throughout the world. It has a rich history of the corporate group as well. That also means; however, the Group faces a wider variety of risks beyond borders and time.

“Risk” is defined as effect of “uncertainty” on objectives. We implement risk management throughout the Group in a systematic and organized manner, and continuously improve it in response to the changing environment.

We believe it is critical to take risks within our risk appetite by identifying, mitigating, and managing them effectively to ensure the success of our Group’s medium-term plan, “2030 Vision : Shift the Phase”.

Basic Policy

Consistent with the “Our Vision” management principles, NSG Group aims to enhance corporate value by sustained growth in line with the medium-term plan “2030 Vision : Shift the Phase.” That said, the business environment enveloping the Group has become increasingly complex and is continuing to dynamically transform. We see risks in the uncertainties that stem from internal and external factors, which threaten to affect the Group’s ability to achieve its business targets. We therefore position risk management, which is tasked with identifying, assessing, and properly managing major risks, as an important part of our management foundation in order to minimize the negative effects and maximize positive results. By systematically and methodically implementing appropriate risk management across the entire Group, we can not only achieve our short-term business targets,

but also reliably execute business strategies.

NSG Group’s risk management is carried out in accordance with our Fundamental Policy on Internal Control Systems, which was resolved by the Board of Directors in accordance with the Companies Act and Corporate Governance Code. Specific measures for addressing risks that arise in connection with our corporate activities are prescribed in our NSG Group Risk Management Policy and are consistent with ISO 31000 (principles and guidelines on risk management) as well as the COSO Enterprise Risk Management model.

We are looking to continuously improve our systems in line with developing standards and the evolving risk landscape.

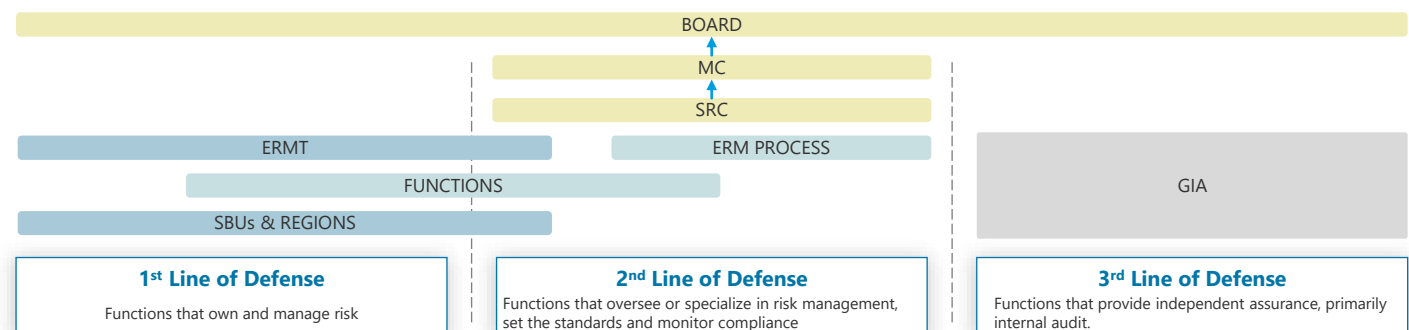
Framework

NSG’s risk management systems are established so that they are fully embedded within the Group’s day-to-day operations and operate as “three lines of defense”. The first line of defense is established within the business SBU’s and Group Functions who operate controls and mitigations to identify, assess and manage risks across all the activities of the Group as part of its the day-to-day operations. The second line of defense is made up of the Group Functions and management forums who not only set the operating and risk management policies and standards for the operations, but also monitor the effective operation of the controls.

The third line of defense is provided by the Group Internal Audit Function who make an independent evaluation of the effectiveness of the controls and the risk management processes.

At the heart of its enterprise risk management system – mainly the second line of defense – NSG Group employs a two-tiered “hybrid” risk management framework comprising the Strategic Risk Committee (SRC) as a top-down approach and the Enterprise Risk Management Team (ERMT) as a bottom-up approach, both of which are under the supervision of the Management Committee, and report onwards to the Board of Directors.

ERM Organization – Three Lines of Defense



Risk Management

SRC Structure and Purpose

Top-down Risk Review

SRC is chaired by the Chief Risk Officer (CRO) and its members are mostly executive officers including CEO. SRC determines the companywide risk management policy and framework, based upon which it identifies and classifies: (a) high level risks thought to have a serious impact on the Group; and (b) operational risks that ought to be managed by SBUs or Group functions. It then monitors how those risks are being addressed and requests that additional measures be taken if required. For high level risks, SRC appoints "risk owners" to manage the collection of risk information and the progress of countermeasures.

CRO presides over all SRC meetings and as representative of the committee, periodically reports to and receives feedback from the Management Committee and the Audit Committee regarding the effectiveness of the Group's basic internal control system and risk management structure.

On an annual basis the SRC members formally review the current risk universe and the results of the ERMT Bottom-Up Risk Review as explained below, to identify if the risks being monitored by SRC need to be amended.

In FY2024/3, SRC convened three meetings and reported once each to the Management Committee and the Audit Committee.

Bottom-up Risk Review

ERMT is chaired by CFO and its members comprise heads and relevant senior managers of SBUs and functions such as accounting, finance, human resources and legal. Every year this team identifies, assesses, and prioritizes the key risks pertaining to business execution and endeavors to improve the effectiveness of risk management by formulating necessary measures to mitigate risks. Those risks and mitigation measures are reviewed as necessary according to the circumstances from time to time, among others, material risks are escalated to, and monitored by SRC. ERMT periodically, or whenever requested, reports on its activities to SRC.

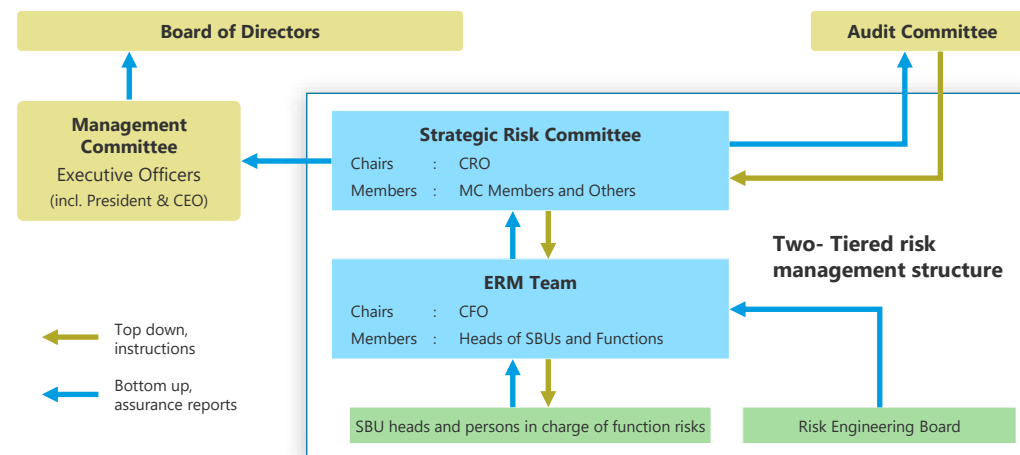
Independent Assurance

The Internal Audit Department's role is to provide assurance from an independent standpoint, regarding the companywide efficiency of risk management, and the effectiveness of specific risk mitigations.

Global Insurance Program

To transfer or share risks, we have established an NSG Group Insurance Program. The program identifies the key insurable risks, including property losses caused by natural disasters, and endeavors to transfer them by placing cost effective insurance. Every year, under the supervision of SRC, we review the Group's comprehensive insurance coverage under the global insurance program.

NSG Group Risk Management Structure



Major Risks for NSG Group

In FY2024/3 SRC identified, assessed and monitored the following risks. For each risk, an owner has been appointed from among the executive officers or senior managers, to take responsibility for appropriately managing it.

For each of the key risks being monitored, SRC has determined that sufficient mitigations are in place, or are being progressed, to manage the risk within the Group's appetite.

Lack of Funding	Lack of Adequate Talent
Economy & Market	Failure to Deliver Key Contracts
Efficiency & Cost base	Loss of Market
Commodities & Supply & Business Interruption & Asset Loss	Political / Fiscal Regime
Failure to Identify / Manage Cyber Incident	Non-Compliance with Laws / Regulations
Product Quality Failures	Change Readiness / Project Execution Failure
Climate Change & ESG	Failure to Adequately Resource Product & Process Development
Technology & Systems	Third party IP Constraints on VA Growth

Risk Management

Risk Focuses - **Quality Fraud Prevention**

Head of Manufacturing Excellence and
Global Head of Automotive Manufacturing

Stephan Rosebrock

Publicity of a major OEM quality inspection fraud in Japan, and other recent product fraud scandals, has increased public interest and concern about the adequacy of controls to mitigate product quality fraud risks. NSG Group has decided to revisit its controls and regular Group activities to further strengthen the prevention from such kind of fraud and mitigate possible risks. With support and under the guidance of Group Internal Audit (GIA) the Group have conducted a risk assessment and identified their control activities in this regard.

NSG Fraud Prevention Controls

NSG considers Ethics and Compliance together with Health and Safety as a Top Priority of Company Business Principles. The underlying foundation of quality product and service assurance is the 3 line of defense model, which was implemented some years ago as a Group model to define the roles and responsibilities for effective risk management and internal controls. In addition to the 3 lines of defense, further controls and monitoring activities exist at a Company Group-wide Level and through Third-Party External Audits.

At Company level specific annual mandatory trainings are carried out with the objective to bring full awareness on the strong ethical principles of the company and possible consequences in case of a misconduct. It has been established over many years a robust system of available reporting channels for possible fraud activities. All allegations of fraud are

investigated under the supervision of GIA and Ethics & Compliance and reported to the NSG Board as well as Audit Committee, with recommendations made to strengthen controls where necessary.

Our Manufacturing Excellence Teams (2nd line of defense) are supporting the process with constant update and upgrade of the Business Management System (BMS), as well as a robust data reporting system, dissemination of Lessons Learnt and regular discussions on Quality Dilemmas. This helps to raise awareness of possible fraud attempts and enables management to take timely and appropriate actions.

Overall, considering various controls currently in place, the risk of product quality fraud for the Group has been assessed as “Low”, but NSG will continue to review and assess existing controls to fully ensure the commitment to its ethical.

Company Level	1st Line of Defense	2nd Line of Defense	3rd Line of defense	External
Corporate	Business Unit / Procurement	Manufacturing Excellence	Group Internal Audit	Third Party Audit
<div>←</div> <ul style="list-style-type: none"> – Code of Ethics – Group Policies – Ethics and Compliance Training 	Business Management System (BMS) <ul style="list-style-type: none"> – Internal Quality Audits and Procedures – Segregation of Duties – Supplier Selection Process – Supplier Performance & Risk Management Procedures – Ethics and Compliance Hotline 	<div>→</div> <ul style="list-style-type: none"> – Production Data Monitoring and Standard Reporting – Group Quality Policy and QA guidelines – Lesson Learnt Dissemination – Ethical Dilemma Dissemination 	<ul style="list-style-type: none"> – Inventory Management – Quality Incident Reporting – Fraud Investigation 	<ul style="list-style-type: none"> – ISO/TS Audit – Customer Audits

Risk Management

Risk Focuses - Sustainable Supply Chain Charter



Procurement Manager - Supplier Capability & Development

Jaroslaw Plewniok

NSG Group Sustainable Supply Chain Charter, officially announced on September 2023, represents our commitment to sustainable practices within our supply chain.

The Charter is focused around 8 Key Sustainability Impact areas identified as having the greatest influence on ESG goals: Reducing greenhouse gases, Protecting the environment, Protecting labor and human rights, Reducing Waste, Conserving Water, Supporting Diversity, Equity, and Inclusion, Improving transparency in the entire supply chain, and Supporting communities. This chapter outlines the Charter communication, assessment strategies and capacity building for supplier engagement.

The integration of the Sustainability Charter and supplier engagement processes ensures that sustainability remains at the core of our supply chain practices.

Charter Communication

Announcement	The Charter was introduced via a news release on the NSG website and social media channels, supported by interviews with our CEO, Head of Sustainability and Chief Procurement Officer.
Multilingual Resources	A dedicated sub-page on the NSG website provides the Charter in various languages, along with a promotional video. Training resources are accessible through our partnership with the Supply Chain Sustainability School.*
Webinars	Webinars were conducted to familiarize key suppliers with the Charter's principles and rules of engagement.
Ongoing Communication	Procurement team members maintain one-on-one communication with suppliers.
Feedback	Overall, suppliers and internal stakeholders responded positively, although some concerns about specific requirements were raised.
Acceptance Process	Suppliers in scope will be required to provide electronic consent starting from FY2025 Q2.

Supplier Sustainability Assessment

Charter Alignment	Suppliers must align with the Charter's principles based on their sustainability impacts and risk profile.
EcoVadis IQ+ Scans	All suppliers underwent sustainability risk profiling using EcoVadis IQ+ solution. This assessment considered the German Supply Chain Due Diligence act (LKSG) and future compliance with the Corporate Sustainability Due Diligence Directive (CSDDD). Currently 65% of suppliers by spend are assessed by a full EcoVadis scorecard, giving a greater insight to their risk and sustainability performance.
Risk Prioritization	Combining EcoVadis IQ+ risk ratings with our Risk Heat Maps helps prioritize actions.
Focus Areas	Preferred, Strategic, and suppliers with High or Very High-risk levels are prioritized for onboarding.

Capacity building for supplier engagement - Supply Chain Sustainability School^{*1}

Usage Statistics	– Over 85 active users (also beyond NSG Procurement) with over 236 hours spent, and nearly 200 unique resources accessed.
Engagement with The School	– Participation in webinars and conferences – NSG's contribution to Climate Change Conference – Specific resources (Learning Pathways) covering 8 Key Sustainability Impacts available internally and externally. – Intention to onboard selected High-risk suppliers into specific training in FY2025/3
Collaboration between the School and EcoVadis	– NSG case study on addressing "Social aspects in ESG" was featured in a joint webinar in July FY2025/3.

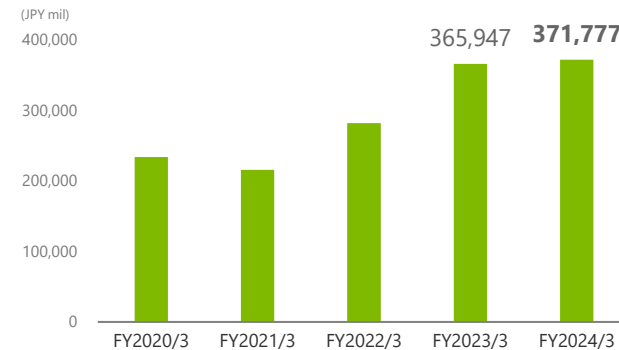
^{*1}Launched in 2012, the Supply Chain Sustainability School is a free learning environment, upskilling those working within, or aspiring to work within, the built environment sector. With over 190 Partners, the School is the key industry-led organization for driving the improvement of sustainability knowledge and skills throughout the whole value chain. Partners include clients, major contractors and key suppliers all with one mission – to deliver more efficient and sustainable projects. They lead and drive the direction of the School, ensuring that a tailored, supply chain support approach can be delivered across industry. School is focused on 17 key topics of Sustainability, as well as addressing topics in Offsite, Procurement, Digital, Lean Construction, Management, People and FIR (Fairness, Inclusion and Respect).

Business Results and Forecast for each SBU

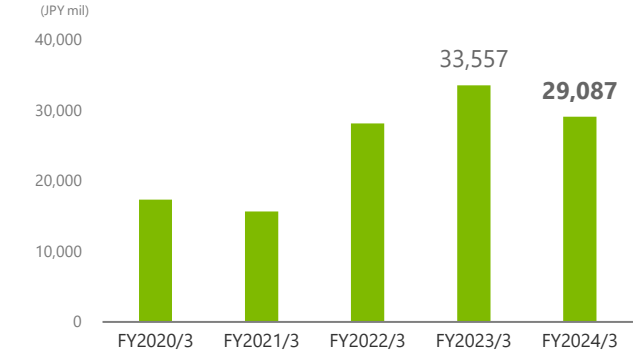
Architectural Glass business



Sales



Operating Profits



FY2024/3 results

The Architectural business recorded cumulative revenues of ¥ 371,777 million (FY2023/3: ¥ 365,947 million) and an operating profit of ¥ 29,087 million (FY2023/3: ¥ 33,557 million).

Architectural revenues were similar to the previous year, and profits below, with a declining performance across Europe and North America, partly offset by positive results in Japan, South America, and the Group's solar energy business.

In Europe, revenues and profits were below the previous year as volumes and prices reduced in line with deteriorating economic activity during the second half of the year. The impact of the weaker market conditions was mitigated somewhat by a decrease in input costs.

In Asia, revenues and profits were above the previous year. Results improved in Japan, assisted by improved selling prices, although markets remain depressed in other South-East Asia regions. Volumes of glass for solar energy were positive. During the third quarter, the Group completed the conversion of its float glass production line in Malaysia, from the production of architectural products for buildings, to glass for solar energy.

In the Americas revenues were ahead of, and profits were similar to, the previous year. In North America, results improved with increasing solar energy volumes offsetting a challenging domestic architectural market. Sales volumes in South America benefitted from the Group's new float glass facility in Argentina.

FY2025/3 assumptions

In Architectural business, the economic slowdown in Europe will continue for the time being while a favorable demand-supply situation in Japan, South America, and solar is expected.

In Europe, sales volume and prices will decrease affected largely by economic slowdown with input cost increase.

In Asia, sales volume and price in Japan are expected to increase under the favorable demand-supply situation while the competitive situation should be monitored in other East Asian countries. In the Americas, sales volume will decrease affected by softened demand although in South America, the supply-demand environment is expected to remain tight.

Demand for solar energy glass is expected to remain strong due to the shift to renewable energy. Also, a new capacity in Malaysia which started operation in December 2023 is expected to contribute for a full year. We will convert the existing float line in Rossford, Ohio, USA, into a new solar capacity planning to start its operation in 2025 Jan-Mar.

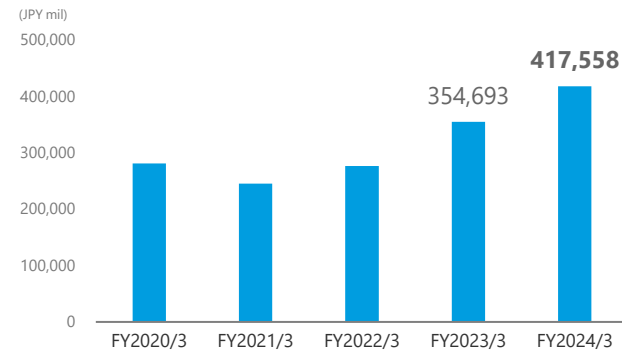
Business Results and Forecast for each SBU

Automotive Glass business

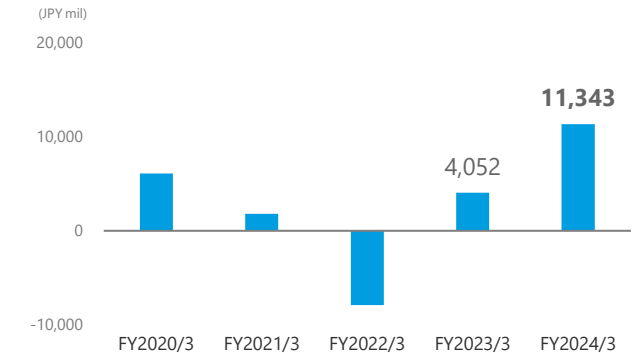


2021 Mercedes-Benz S-Class Photo courtesy of Mercedes-Benz AG via Daimler Media Site

Sales



Operating Profits



FY2024/3 results

The Automotive business recorded cumulative revenues of ¥ 417,558 million (FY2023/3: ¥ 354,693 million) and an operating profit of ¥ 11,343 million (FY2023/3: ¥ 4,052 million). Higher sales volumes were experienced across most regions, as an easing of supply chain constraints allowed the Group's customers to recover levels of production.

In Europe, revenues improved, with increased input costs being partially recovered from customers. Volumes benefitted from improving vehicle sales, together with a replenishment of vehicle inventory at customers and distribution networks, with supply chain constraints continuing to ease.

In Asia, revenues and profits improved from the previous year. Japanese volumes benefitted from increased vehicle sales, and profitability was also assisted by agreements with customers to mitigate the continued high level of input costs.

In the Americas, revenues and profits both increased from the previous year. Demand benefitted from a recovery in vehicle sales and a lessening of supply chain constraints at the Group's customers.

FY2025/3 assumptions

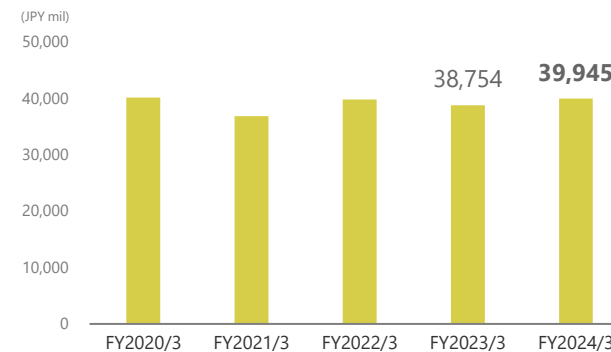
Modest sales volume recovery is expected reflecting an increase in car production although the impact of higher input costs continues. We aim to mitigate these impacts through continuous cost reductions, rational price pass-throughs, and expansion of value-added products based on our unique technologies such as HUD, windshields with ADAS, and roof lights with light control.

Business Results and Forecast for each SBU

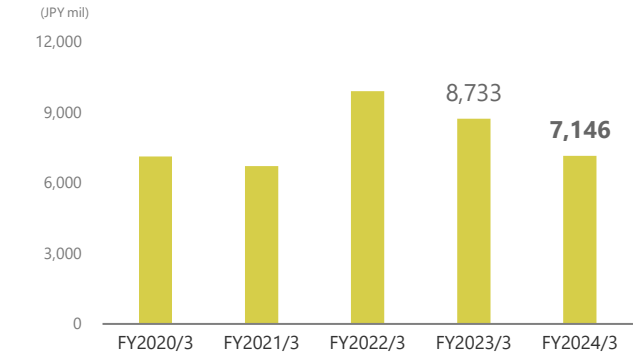
Technical Glass business (Creative Technology business)



Sales



Operating Profits



FY2024/3 results

The Technical Glass business recorded cumulative revenues of ¥ 39,945 million (FY2023/3: ¥ 38,754 million) and an operating profit of ¥ 7,146 million (FY2023/3: ¥ 8,733 million).

Technical Glass revenues were slightly improved, with demand varying across sectors. Profits declined, with challenging market conditions in some areas preventing the recovery of increased input costs.

In the Fine Glass business, revenues and profits declined due to an adverse mix of products sold compared to the previous year. In the Information Devices business, demand for printer lenses was adversely affected by weak consumer demand and inventory reductions at the Group's customers. Volumes of glass cord used in engine timing belts benefitted from improving conditions in automotive markets. Metashine sales increased both for automotive and cosmetics applications.

FY2025/3 assumptions

In the Technical Glass business, higher profitability is forecasted while being affected by continuous cost increases and the IT market slowdown.

In the fine glass, continuous cost reduction efforts are expected to contribute to profit while economic and IT market slowdowns are concerned.

In the printer lenses business, further weakening of demand is forecasted affected by the demand decrease of working from home and school from home.

Glass cord demand will continue to increase gradually driven by an easing of supply chain issues previously impacting customers.

Evaluation by External Party



CDP Rating

Since 2011, NSG Group has participated in annual CDP* Climate Change and Water reporting.

Please refer to the "[Latest report](#)".

This year, the Group's CDP Climate Change 2023 score improved from the previous B management rating to an A- leadership rating. This score improvement recognizes the Group's continuous climate change actions and commitment to transparency. It encourages the Group to continue its ongoing efforts to achieve its 2030 Science Based Targets for CO₂ emission reduction.

Please refer to the "[Roadmap to Carbon Neutral](#)".

Rating on Climate Change (Excerpt from the CDP report)

NSG Group uses CDP's global environmental disclosure system to transparently respond to multiple stakeholder requests in a consistent way. CDP reporting allows investors and customers to understand how emerging risks and opportunities on climate change and water security are managed in the value chain and quantify embodied impacts in products.

In addition, as a result of our collaborative efforts with our suppliers in the area of ESG, we were recognized as a leader in supplier engagement in the 2022 CDP assessment. This ranks us in the top 500 companies worldwide, including 105 Japanese companies, out of a total of more than 13,000 companies evaluated, placing us in the top 3% of the glass industry.

CDP reporting has guided NSG Group to develop a data driven strategy, prepare for environmental regulation, set challenging Science Based Targets, introduce internal carbon pricing and align to best practice TCFD recommendations.

Annual feedback scores allow NSG Group to track progress and benchmark its environmental performance against the industry peers.



EcoVadis CSR Rating

EcoVadis operates an independent, external platform allowing companies to assess and benchmark their environmental and social performance on a global basis.

The process assesses company policies, implemented procedures and published reports with regards to environmental, labor practices & human rights, fair business practices and sustainable procurement issues. The assessment is conducted by CSR experts of EcoVadis on the basis of company answers to a survey which is dynamically adapted to country, sector and size, using scorecards covering 150 industry categories and 21 CSR criteria. The rating is based on supporting documentation, public and stakeholder (NGOs, trade unions, press) information.

We used this assessment tool to gain a picture of our CSR performance and to understand areas for improvement. We were rated as Bronze regarding our approach to CSR management.



FTSE Blossom Japan Index

Inclusion in FTSE Blossom Japan Index

As in the previous year, Nippon Sheet Glass Co., Ltd. has been selected as a constituent of the FTSE Blossom Japan Index, an index of Japanese companies that demonstrate outstanding Environmental, Social and Governance (ESG) performance.



Inclusion of S&P/JPX Carbon Efficient Index

Nippon Sheet Glass Co., Ltd. has been selected as a constituent of S&P/JPX Carbon Efficient Index. This index is an environmental index jointly developed by the Japan Exchange Group, the Tokyo Stock Exchange, and S&P Dow Jones Indices, and has been adopted by the Government Pension Investment Fund (GPIF) since 2018.

Evaluation by External Party



Evaluation by financial institutions

In 2018, NSG Group has received the highest rating as "especially progressive environmental initiatives" by Development Bank of Japan, Inc. (DBJ) under its "DBJ Environmentally Rated Loan Program". Also, NSG Group scored highly in the "commitment line syndication based on an ESG/SDGs evaluation" arranged by Sumitomo Mitsui Banking Corporation in 2021.

Please refer to the news releases.

[NSG Received High Scores in the Commitment Line Syndication based on ESG/SDGs Evaluation by SMBC](#)

November 25, 2021

[NSG Receives Highest Mark in Environmentally Rated Loan by Development Bank of Japan](#)

October 1, 2018

External Evaluation of Health Management (METI Health Management Survey)

Nippon Sheet Glass Co., Ltd. has been certified by the Japan Health Council as a 2024 Excellent Health Management Corporation (Large Corporation Division) in 2024 as a result of its continuous efforts to address employee health issues based on its Declaration of Health Management.

This certification will continue for five years from 2020.

[Certified as a '2024 Excellent Health Management Corporation \(Large Corporation Division\)' for five consecutive years](#)

(as of 19 March 2024, only in Japanese).

Certification as a Company Supporting Childrearing

Nippon Sheet Glass Co., Ltd. was certified by the Tokyo Labor Bureau of the Ministry of Health, labor and Welfare on December 4, 2015 as a "Child Rearing Support Company" under the Act on Advancement of Measures to Support Raising Next-Generation Children, and acquired the "Kurumin" next-generation certification mark. Furthermore, on December 5, 2019, we acquired the "Platinum Kurumin" certification as an excellent company with a high level of commitment among "Kurumin" certified companies.

We have been actively supporting childcare and continuing our efforts to become a company where everyone can work more comfortably. Specifically, we have improved the work-life balance by promoting diverse work styles through the creation and distribution of childcare guidebooks, encouraging male employees to take childcare leave, making childcare leave partially paid, introducing telework throughout the company, expanding flextime, interviewing employees about taking planned annual leave, and revising employee nursing care leave regulations. We are also working to improve the work-life balance by promoting a variety of work styles. In addition, efforts to promote the advancement of women include building a women's network, holding women's career workshops, unconscious bias training for managers, and reviewing the personnel system to make it more conducive to diverse work styles and careers. We will continue to promote diversity, equity & inclusion, aiming to be a company where each and every employee can play an active role. For more information, please see the press release.

[Obtained "Platinum Kurumin" certification as a childcare support company](#)

December 24, 2019 - Release in Japanese

["Kurumin" Certification for Childcare Support Company](#)

December 21, 2015

Independent Assurance Report



Greenhouse Gas Verification Opinion Number
14064.INV.0014.2023

The inventory of Greenhouse Gas emissions in the period
01/01/2023 – 31/12/2023 for

Nippon Sheet Glass Co. Ltd. (NSG Group)

European Technical Centre
Lathom,
Nr Ormskirk
L40 5UF

has been verified in accordance with ISO 14064-3:2019 To represent a total amount of:

2,922,201 Tonnes CO₂e Scope 1
500,692 Tonnes CO₂e Scope 2 (Market Based)
3,235,260 Tonnes CO₂e Scope 3

For the following activities
Manufacture of Glass and Glazing Products

Authorised by:
Pamela Chadwick
Business Manager
SGS United Kingdom Ltd

Verification Opinion Date 14th June 2024

This Opinion is not valid without the full verification scope, objectives, criteria and conclusion available on pages 2 to 4 of this Opinion.

SGS United Kingdom Ltd | Inward Way, Rossmore Business Park, Ellesmere Port, Cheshire CH65 3EN Tel +44 (0)151 350 6666
Climate Change Programme ukclimatechange@sgs.com www.sgs.com
Member of SGS Group

Registered in England No. 1193985 Registered Office: Rossmore Business Park, Ellesmere Port, Cheshire CH65 3EN

NSG Group has received assurance from an independent third party (SGS United Kingdom) in accordance with ISO 14064-3:2019 for the data on Scope 1, Scope 2, and Scope 3 of its greenhouse gas emissions as below to ensure objectivity and accuracy of information.

Please refer to Independent Assurance Report at our website.

[Independent Assurance Report \(nsg.com\)](https://www.nsg.com/independent-assurance-report)



Schedule Accompanying Greenhouse Gas Verification Opinion Number
14064.INV.0014.2023

Initial Description of Verification Process

SGS has been independently engaged by Nippon Sheet Glass Co. Ltd. to conduct a verification for NSG Group of direct and indirect carbon dioxide (CO₂) equivalent emissions as provided in their GHG Statement in the form of a Greenhouse Gas Emissions Report covering CO₂ equivalent emissions.

Role and responsibilities

The management of NSG Group is responsible for the organization's GHG information system, the development and maintenance of records and reporting procedures in accordance with that system, including the calculation and determination of GHG emissions information and the reported GHG emissions.

It is SGS' responsibility to express an independent GHG verification opinion on the emissions as provided in the NSG Group GHG Statement for the period 01/01/2023 – 31/12/2023.

SGS conducted a third-party verification following the requirements of ISO 14064-3:2019 of the provided CO₂ equivalent Statement in the April to June 2024.

The assessment included data review of data and supporting information and site visits. The verification was based on the verification scope, objectives and criteria as agreed between NSG Group and SGS in April 2024.

Level of Assurance

The level of assurance against a limited level of assurance:

Scope

- Title or description of activities: Manufacture of glass and glazing products
- Types of GHG included: CO₂, NO₂, CH₄, HFCs
- Geographic boundaries: Global
- GHG reduction initiatives: none
- GHG information for the following period was verified: 01/01/2023 – 31/12/2023
- Physical infrastructure, activities, technologies and processes of the organization: Manufacturing facilities, offices, warehouses and distribution centres, transport
- GHG sources, sinks and/or reservoirs included:
 - Scope 1: Direct GHG emissions: stationary combustion, mobile combustion, process emissions, fugitive emissions
 - Scope 2: Indirect GHG emissions from imported energy – purchased electricity
 - Scope 3: Purchased goods and services, capital goods, fuel and energy related activities, upstream transportation and distribution, waste, business travel, employee commuting, downstream transportation and distribution, processing of sold products, use of sold products, end of life treatment of sold products and byproducts
- Intended user of the verification Opinion: internal, customers, general public

NSG Group has commissioned an independent verification by SGS of reported CO₂ equivalent emissions arising from their activities, to establish conformity with the requirements of the GHG Protocol Corporate Accounting and Reporting Standard and ISO 14064-3:2019 within the scope of the verification as defined below. Data and information supporting the CO₂ equivalent statement were predominantly historical in nature and proven by evidence.

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Objectives

The purpose of this verification exercise was, by review of objective evidence, to independently review:

- Whether the CO₂ equivalent emissions are as declared by the organization's CO₂ equivalent statement
- That the data reported are accurate, complete, consistent, transparent and free of material error or omission

Criteria

Criteria against which the verification assessment is undertaken are the requirements of The GHG Protocol Corporate Accounting and Reporting Standard and ISO 14064-3:2019.

Materiality

The materiality required of the verification was considered by SGS to be below 10%, based on the results of the intended use of the GHG Statement.

Conclusions

We planned and performed our work to obtain the information, explanations and evidence that we considered necessary to provide a limited level of assurance that the CO₂ equivalent emissions for the period 01/01/2023 – 31/12/2023 are fairly stated.

This Opinion shall be interpreted with the CO₂ equivalent statement of NSG Group as a whole.

The GHG information for the period 01/01/2023 – 31/12/2023 of NSG Group disclosing gross emissions of:

- 2,922,201 Tonnes CO₂e Scope 1
- 500,692 Tonnes CO₂e Scope 2 (Market Based)
- 3,235,260 Tonnes CO₂e Scope 3

174,869 Tonnes CO₂e Scope 2 (Location Based)

Share of renewable electricity used as a % of total electricity consumed in 2023: 35%

We are verifying SGS to a limited level of assurance, consistent with the agreed verification scope, objectives and criteria.

SGS approach is risk based, drawing on an understanding of the risks associated with modeling GHG emission information and the controls in place to mitigate those risks. Our assessment included assessment, on a sample basis, of evidence relevant to the voluntary reporting of emission information.

SGS concludes with limited assurance that there is no evidence to suggest that the presented CO₂ equivalent emissions are not materially correct and do not fairly represent the CO₂ equivalent data and information.

Note: This Opinion is issued, on behalf of SGS, by SGS United Kingdom Ltd, Rossmore Business Park, Inward Way, Ellesmere Port, Cheshire CH65 3EN (25/2) under its General Conditions for GHG Verification and Validation Services. The findings recorded herein are based upon an audit performed by SGS. A full copy of this Opinion and the supporting GHG Statement may be consulted at NSG Group. This Opinion does not relieve Client from compliance with any relevant, binding

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national or regional acts and regulations or with any guidelines issued pursuant to such regulations. Situations to the contrary are not binding on SGS and SGS shall have no responsibility vis-à-vis parties other than its Client.

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History of NSG Group

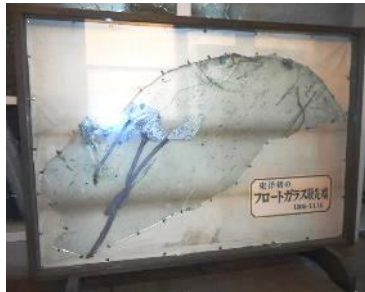


Futajima Plant in Fukuoka, Japan

1910s ~ 1940s

Foundation and expansion.

- 1918 America Japan Sheet Glass Co., Ltd. was established
- 1920 New capacity added at Kitakyushu
- 1931 Company name changed to Nippon Sheet Glass Co Ltd
- 1936 Operation started at Yokkaichi



First piece of float glass ever made in Asia

1950s ~ 1960s

Business expansion and coming of float glass age

- 1950 Company shares listed in Tokyo and other stock exchanges in Japan
- 1952 Operation started at Maizuru
- 1964 Operation started at Chiba
- 1965 Float glass production commenced first in Asia with technology licensed from Pilkington
- 1968 Established Research Center at Itami, Hyogo
SELFOC™ developed

Maizuru Plant in Kyoto, Japan



1970s ~ 1980s

Globalization of Architectural and Automotive Glass businesses.

- 1970 Manufacturing footprints expanded in Kyoto and Kanagawa
- 1971 Joint venture established in Malaysia
- 1975 Automotive joint venture established in Mexico
- 1978 Thin glass UFF™ (Ultra Fine Flat Glass) production start
- 1979 Launch of the glass fiber business
NSG Foundation established to commemorate the 60th anniversary of the Company
- 1980 Operation started at Sagamihara
- 1986 Automotive joint venture established in the US

Build a foundation of Technical Glass with new products and technologies.



The SELFOC is still core technology in NSG

1990s ~ Today

Further business globalization and contribution to a sustainable society.

- 1990 A 20 per cent stake of Libbey-Owens-Ford Company (Current Pilkington North America, Inc.) acquired
- 1995 Automotive and Technical Glass joint ventures established in China and an Architectural joint venture in Vietnam
- 1999 Manufacturing footprints expanded in Tsu
- 2000 Shares of Pilkington acquired
- 2001 Increase in Pilkington shareholding to 20 per cent to become an affiliate of the Company
- 2004 Company headquarters moved to Tokyo
- 2006 Acquisition of Pilkington plc
- 2008 Adopted "Company with Committees (Current Company with a Nomination Committee)" system
- 2011 Adoption of IFRS
Production of solar energy glass started in Vietnam
- 2018 100th Anniversary
- 2020 Float lines for solar energy glass established in the US and expanded in Vietnam
- 2021 Medium Term Vision and Medium Term Management Plan, "Revival Plan 24 (RP24)" launched
- 2022 Operation started in the second float furnace in Argentina
- 2023 Production of solar energy glass started with converted float furnace in Malaysia
- 2024 Medium-Term Plan, "2030 Vision : Shift the Phase" launched



Vietnam Float Glass Co Ltd

Shareholder Information

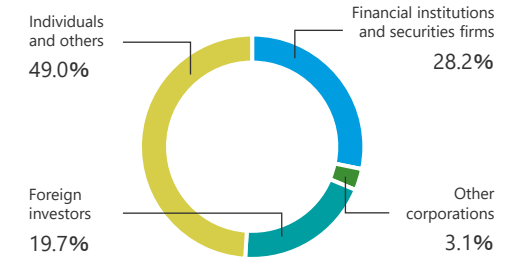
Corporate Data As of March 31, 2024

Securities Code	5202
Authorized Shares	177,500,000
Issued Shares	91,401,499 (Common Shares)
Number of shareholders	49,878(Common Shares)
Trading unit of shares	100 (Common Shares)
Stock Listing	Tokyo Stock Exchange, Prime Market
Fiscal Year end	March 31
Annual Meeting of Shareholders	June
Record Dates	Ordinary General Meeting of Shareholders 31 March
	Dividend 30 September and 31 March
	If necessary, a public notice is given and a record date is set
Transfer Agent	Sumitomo Mitsui Trust Bank, Limited. Stock Transfer Agency Division 4-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo, Japan
Operating office	Stock Transfer Agency Department, Sumitomo Mitsui Trust Bank, Limited 4-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo, Japan
	(Mail Address) Stock Transfer Agency Department, Sumitomo Mitsui Trust Bank, Limited 8-4, Izumi 2-chome, Suginami-ku, Tokyo 168-0063, Japan
Operating office	(Telephone Number) 0120-782-031 (toll free in Japan)
Public Notice	https://www.nsg.com/
Accounting auditor	Ernst & Young ShinNihon LLC
Shareholder benefit program	No

Note: Effective as from 1 October 2016, the Company conducted a share consolidation in which every ten common shares were consolidated into one share.

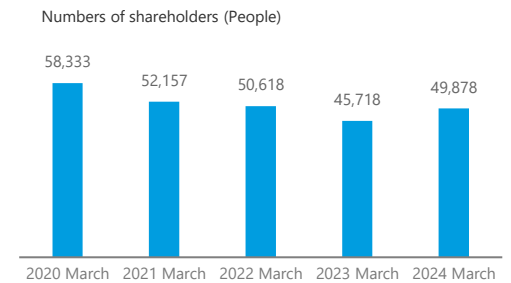
Share ratio in status of shareholders (Common Shares)

	2020 March	2021 March	2022 March	2023 March	2024 March
Financial institutions and securities firms	25.0%	27.3%	25.1%	31.1%	28.2%
Other corporations	4.1%	3.7%	3.5%	3.3%	3.1%
Foreign investors	13.7%	21.1%	23.6%	25.4%	19.7%
Individuals and others	57.2%	47.9%	47.7%	40.2%	49.0%



Numbers of shares and shareholders (Common Shares)

	2020 March	2021 March	2022 March	2023 March	2024 March
Numbers of issued shares excluding own shares (1000units)	90,621	90,787	90,974	91,136	91,368
Numbers of shareholders (people)	58,333	52,157	50,618	45,718	49,878



Major Shareholders (Common Shares)

	Number of shares (1000units)	Percentage of shares
The Master Trust Bank of Japan, Ltd. (Trust Account)	11,660	12.76%
Nomura Securities Co., Ltd	3,545	3.88%
Custody Bank of Japan, Ltd. (Trust Account)	2,446	2.67%
MSIP CLIENT SECURITIES	2,090	2.28%
SBI SECURITIES Co., Ltd.	1,823	1.99%
Client stock ownership of Nippon Sheet Glass	1,491	1.63%
MLI FOR CLIENT GENERAL OMNI NON COLLATERAL NON TREATY-PB	1,355	1.48%
JP MORGAN CHASE BANK 385781	1,231	1.34%
NORTHERN TRUST GLOBAL SERVICES SE, LUXEMBOURG RE CLIENTS NON-TREATY ACCOUNT	1,123	1.22%
SUMITOMO LIFE INSUARANCE COMPANY	914	1.00%

Note: Where the percentage of shares is calculated, treasury shares are excluded from the total number of issued shares and it has been rounded down to the second decimal.

Stock indices

Stock indices that include Nippon Sheet Glass Co., Ltd (As of October 2, 2023)

TOPIX
TOPIX Small
TOPIX 1000
NIKKEI 500 Stock Average
S&P/JPX Carbon Efficient Index
FTSE Blossom Japan Index

Other related links

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