

# AGC Review

Newsletter for Shareholders

Vol. **34** | Issued in  
March 2019

## To Our Shareholders

In FY2018, net sales increased by 59.4 billion JPY, compared to those of the previous year, due to factors such as increased shipments for all business segments and the consolidation of businesses acquired in 2017. While our operating profit increased just modestly, by 900 million JPY, due to factors such as price increases for raw materials and fuels, we achieved profit growth for the fourth consecutive year.

As for the dividend payment for FY2018, the year-end dividend increased by 5 JPY, rising to 60 JPY per share, while the full-year dividend rose to 115 JPY per share, as profit for the year attributable to owners of the parent exceeded expectations.

In our projected earnings for FY2019, we anticipate net sales of 1.6 trillion JPY, a 77.1 billion JPY increase compared to that of the previous year, and an operating profit of 125 billion JPY, a 4.4 billion JPY increase over that of the previous year. We are planning to make significant capital investments in all business segments in FY2019, which will be a time to prepare for regrowth beyond FY2020.

With regard to our policy on shareholder returns, we will continue the consolidated total shareholder return of 50% or more, in a combination of dividends and share buyback. We estimate interim and year-end dividends of 60 JPY per share and the full-year dividend of 120 JPY per share in FY2019.

In FY2018, the first financial year of our medium-term management plan **AGC plus-2020**, we experienced some negative factors, but we started the plan with profit growth. We will continue to steadily execute the plan to realize our *Vision 2025* and continue to be a highly profitable, leading global material and solution provider. As such, we look forward to your continued support of the AGC Group.



**Takuya Shimamura**  
President and CEO

# Highlights of the Group's Financial Results

Fiscal 2018 Results and  
Fiscal 2019 Forecast

## Net sales

Net sales rose due to factors such as increased shipments for all business segments and the consolidation of businesses acquired in 2017

## Operating profit

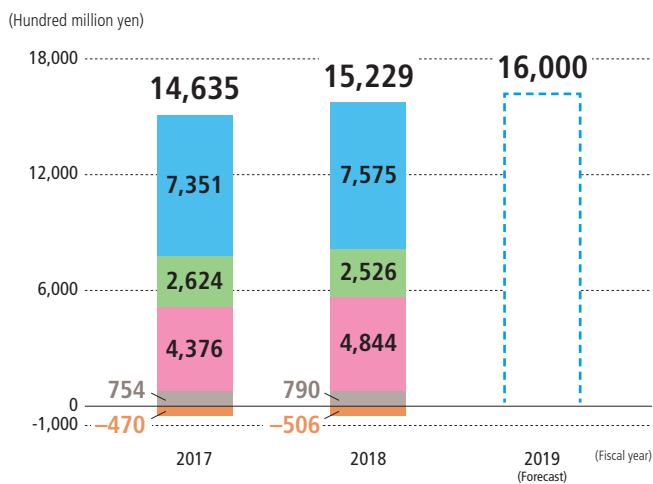
We achieved profit growth for the fourth consecutive year, despite factors such as price increases for raw materials and fuels

## Profit for the year attributable to owners of the parent

Increased due to factors such as lower corporate taxes compared to those of the previous year

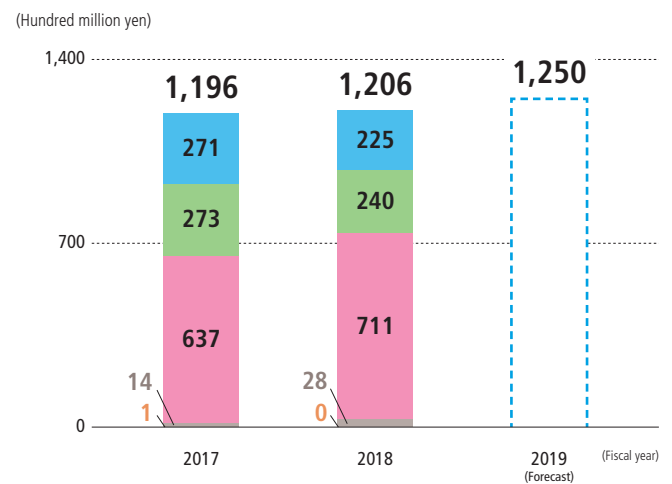
## Net sales

**15,229** hundred million yen  
(up 4.1% year-on-year)



## Operating profit

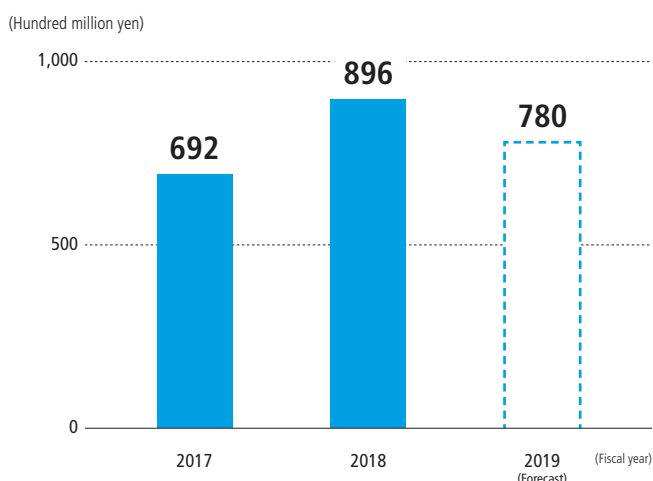
**1,206** hundred million yen  
(up 0.8% year-on-year)



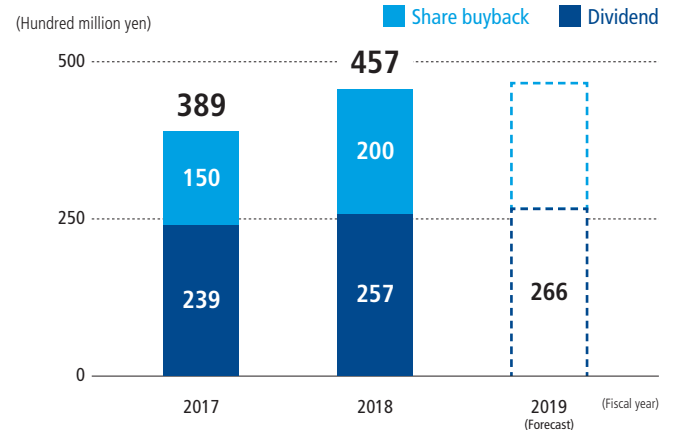
[Segment] ■ Glass ■ Electronics ■ Chemicals ■ Ceramics/Other ■ Corporate or elimination

## Profit for the year attributable to owners of the parent

**896** hundred million yen  
(up 29.4% year-on-year)



## Shareholder return



Dividend per share/year **105 yen\*** **115 yen** **120 yen (plan)**

Consolidated total return ratio **56%** **51%** **50% or more (policy)**

\*It is adjusted to reflect the share consolidation implemented on July 1, 2017.

## Glass Segment

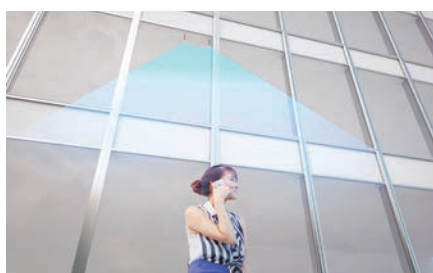
Architectural glass

Automotive glass



©AGC Glass Europe

### Architectural glass Created the World's First Product that Adds Cellular Base Station Functions to Windows



AGC worked with NTT Docomo, Inc. to jointly develop the world's first<sup>\*1</sup> glass antenna that can be attached to the inside surface of existing glass without negatively affecting the local scenery. Both companies plan to expand the glass antenna to LTE-frequency-band base stations from the first half of 2019. Furthermore, the two companies are considering developing 5G<sup>\*2</sup>-compatible products.

\*1 According to AGC research

\*2 5<sup>th</sup>-generation mobile communications system



#### Main features of the glass antenna

- As a transparent glass antenna, does not spoil the local scenery and internal room design.
- Reduces attenuation and reflection of radio waves passing through existing window glass.
- Installed inside buildings, eliminating the need for scaffolding and foundation work.

### Automotive glass Our First Base in Africa: Morocco Plant Started Production

The AGC Group's first base in Africa, a plant in Morocco for producing automobile glass, began operations at the start of 2019. This plant, the 23rd of the AGC Group's plants worldwide for producing automobile glass, will meet demand for glass in southern Europe and northern Africa.



### Automotive glass AGC's eXeview™ Anti-Fogging Glass Used in the Copen Coupe<sup>\*3</sup> from Daihatsu Motor Co., Ltd.

For the first time in the world<sup>\*4</sup>, AGC's eXeview™ anti-fogging glass is being put in the windshields of automobiles. eXeview™ can prevent fogging, which results from increased humidity inside a vehicle, for a certain time. This provides various benefits such as assuring driver visibility for better safety, improving convenience by reducing defogger usage, and improving actual fuel efficiency.



eXeview

\*3 Purchasing registrations for the Copen Coupe completed

\*4 Installed in the driver's field of vision. According to Company research as of December 2018



AGC's original resin film coating material absorbs moisture from the vehicle's interior, preventing the windshield from fogging up.

See the video below for a demonstration.  
<https://www.youtube.com/watch?v=IloxqIUJeb5>

## Electronics Segment

Display

Electronic materials



Electronic materials

### AGC to Further Expand its Supply System for EUVL Mask Blanks

Advances in the sophistication and miniaturization of electronic devices mean that faster semiconductor chip calculation speeds as well as higher capacities and more advanced integration are needed. To achieve those goals, the circuit patterns of semiconductor chips must be further miniaturized. However, with currently available optical lithography technology, it is theoretically unrealistic to model the miniaturized patterns that are referred to as *7 nm node*. EUV<sup>\*5</sup> optical technology is considered the most likely method for creating such fine patterns.

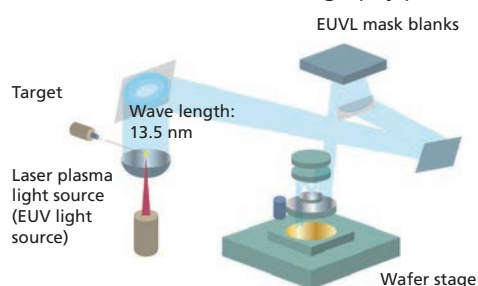


EUVL mask blanks

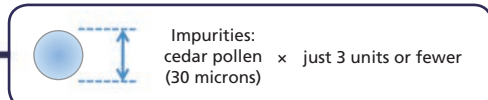
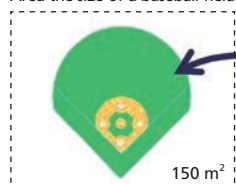
In anticipation of the expansion of EUV lithography, which is expected to become mainstream, AGC has decided to greatly expand the supply system for EUVL mask blanks. Currently, a number of semiconductor manufacturers are planning to use EUVL mask blanks in their cutting-edge 7 nm processes. EUVL mask blanks are made by laminating multiple layers of film onto the surface of a low-expansion glass substrate. The original semiconductor circuit pattern is created on the surface of an EUVL mask blank, then transferred to silicon wafers to create semiconductor chips. The market for EUVL mask blanks is expected to grow significantly, as the miniaturization of semiconductor circuits continues.

\*5 Abbreviation of *extreme ultraviolet*, that is, extreme ultraviolet radiation with a wavelength of 13.5 nm

#### Outline view of the EUV lithography process



Area the size of a baseball field



Cross-sectional image

Surface unevenness is reduced to 13.5 microns or fewer

The required quality standard for EUVL mask blanks is extremely high. As a comparison, for an area the size of a baseball field (approximately 150 m<sup>2</sup>), it would be necessary to limit any impurities, for example, cedar pollen, to 3 units or fewer (approximately 30 microns each) and to limit the unevenness of the surface to 13.5 microns or fewer.

## Chemicals Segment

Chlor-alkali & Urethane

Fluorochemicals & Specialty

Life science



Fluorochemicals & Specialty

### Launched a New Type of Environmentally-Friendly Fluorinated Solvent

AGC handles a variety of environmentally-friendly products for refrigerants used in air-conditioners and freezers/refrigerators and for solvents used for cleaning, coatings, and other applications. AMOLEA™ AS-300 is an environmentally-friendly fluorinated solvent with the power to clean complex items such as precision parts and optical components. With a Global Warming Potential of less than 1, the product leaves little burden on the environment, while having a boiling point, the cleaning power, and a safety record equivalent to those of existing CFC (chlorofluorocarbon) substitutes.







## Net Zero-Energy Building (ZEB\*1) Facility at the Kashima Plant

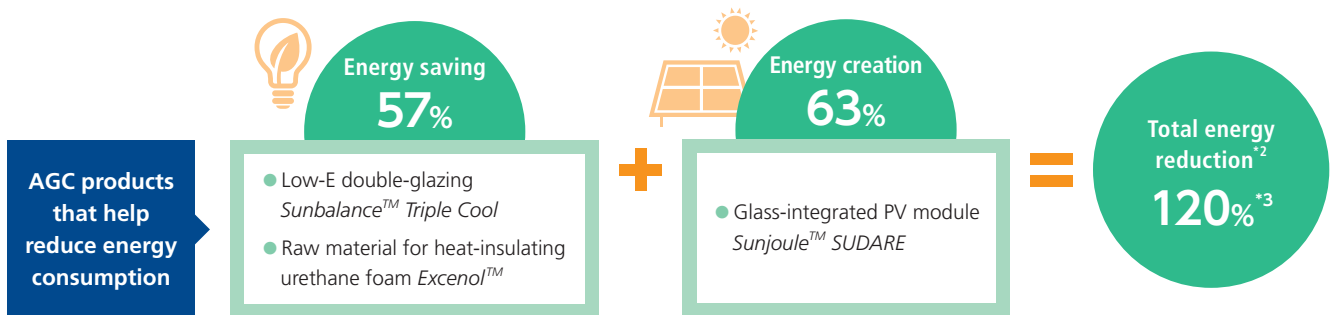


### Kashima Plant

**Location:** Towada 25, Kamisu City, Ibaraki, Japan  
**Start of operation:** 1975  
**Employees:** 620 (as of December 2018)  
**Main business activities:**  
 Production of flat glass for buildings and chemicals

To meet Japan's greenhouse gas emissions target for 2030 (a 26% reduction from the emissions of 2013), acceleration of ZEB construction is urgent. Under the theme of *energy saving and energy creation with AGC products*, AGC rebuilt the office building of its Kashima Plant as a ZEB facility.

\*1 ZEB (Zero-Energy Building): A building intended to offset annual primary energy consumption by saving energy and using renewable energy. There are three categories depending on the percentage of primary energy consumption: ZEB, Nearly ZEB, and ZEB Ready.



\*2 Reduction rate (%) compared with standard primary energy consumption \*3 Result of BELS (Building Energy-efficiency Labeling System) evaluation



### Message from the General Manager of Kashima Plant

Last January, we reopened our office building, which is used for tours and business discussions with many customers, as a ZEB facility. We are demonstrating energy conservation and energy generation solutions by using our own products, such as glass with strong heat-insulating properties, glass fitted with solar power generation modules, and high-performance heat-insulating urethane foam using AGC materials.

**Tatsuhito Kimura**, General Manager, Kashima Plant

## AGC around You

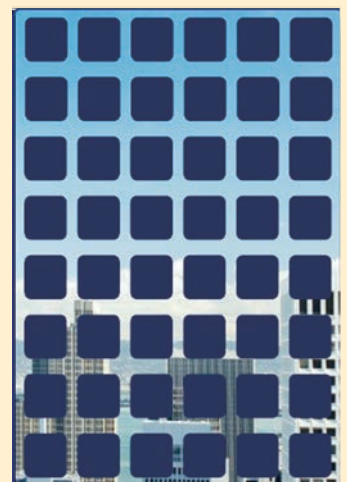
### *Sunjoule™ SUDARE*, Glass Capable of Solar Power Generation

*Sunjoule™* is a system using laminated glass that generates solar power from natural daylight with large-size modules. *Sunjoule™ SUDARE* uses single-crystal silicon cells to create a solar power generation system that is both efficient and transparent, with an appearance similar to the traditional Japanese screens called *sudare*. This system, which leverages natural lighting and the durability of glass, can be used in a variety of settings.

▼ Different views through the modules (illustrative images)



*Sunjoule™ SUDARE*



Existing crystal systems  
(156 mm×156 mm)

## Activities of the Asahi Glass Foundation

The Asahi Glass Foundation was established in 1933 as the Asahi Foundation for Chemical Industry Promotion to commemorate the 25th anniversary of Asahi Glass Co., Ltd. (now AGC Inc.). Currently, the foundation's activities are directed toward creating a truly enriched society for humanity, focusing on three key programs to honor individuals or organizations that have made major contributions toward solving environmental issues, to provide grants for research that forges a path to the coming era, and to provide scholarships to outstanding students who will lead this era.



Blue Planet Prize Award Ceremony (October 2018)

### Commendation program

- Publication of the *Environmental Doomsday Clock*
- Presentation of the international environmental award *Blue Planet Prize* (since 1992)

### Research grant program

- Grants awarded to researchers in universities in Japan, Thailand, and Indonesia
- Grants (up to the present)  
Approximately 5,000  
(totaling approximately 10 billion JPY)

### Scholarship program

- Scholarships given to Japanese and foreign students
- Recipients (up to the present)  
Approximately 4,200  
(totaling approximately 3 billion JPY)

### Corporate Outline

(as of December 31, 2018)

**Company name:** AGC Inc.

**Founded:** September 8, 1907

**Incorporated:** June 1, 1950

**Capital:** ¥90,873,373,264

**Head office:**

Shin-Marunouchi Building, 1-5-1 Marunouchi,  
Chiyoda-ku, Tokyo 100-8405

**Phone:** +81-3-3218-5096

**Number of consolidated subsidiaries:**

213 (including 176 companies overseas)

### State of Shares

(as of December 31, 2018)

**Number of shares outstanding:** 227,441,381

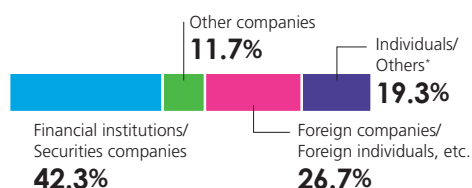
**Number of shareholders:** 59,814

**Shareholders who own shares of one unit or more:**  
52,272

### Shareholder Composition

(as of December 31, 2018)

(Shareholders who own one unit or more)



\*Including 2.6% treasury shares

### Information about Shares

**Fiscal year:** January 1 to December 31

**Ordinary general shareholders' meeting:** March

**Shareholder registration date for entitlement to exercise:**

Voting rights at ordinary general shareholders' meeting: December 31

Rights to receive annual dividend payment: December 31

Rights to receive interim dividend payment: June 30

**Public notice:** Electronic public notices

<https://www.agc.com>

### Shareholder Registrar/Special Account Administrator:

Securities Agency Division, Mitsubishi UFJ Trust and Banking Corporation

Contact:

Phone: 0120-232-711 (toll free within Japan)

Mailing address:

P.O. Box 29, Shin Tokyo Post Office,  
Tokyo 137-8081

Securities Agency Division, Mitsubishi UFJ Trust and Banking Corporation

### Payment of dividends:

As stated in the Articles of Incorporation, dividends not claimed within five years from the starting date of payment are no longer payable. We therefore urge shareholders to claim all payable dividends at the earliest convenient date.

Dividends that the shareholder has not received will be paid at the Mitsubishi UFJ Trust and Banking Corporation.

### To shareholders owning shares constituting less than one unit:

Shareholders owning shares constituting less than one unit (1–99 shares) of AGC may request AGC to purchase such shares/sell additional shares. For the details of such procedures, including requests for necessary forms, please notify the following place of contact.

### Contact Information for Inquiries Regarding Shares

Shareholders who have an account with securities companies, etc.	Shareholders who have a special account
Securities companies or other entities with which you have an account	Mitsubishi UFJ Trust and Banking Corporation (our Special Account Administrator) Phone: 0120-232-711 (toll free within Japan)

### Note concerning information about the future

Please note that statements made in this document concerning projected figures, future measures, and other information about the future involve uncertainties.