

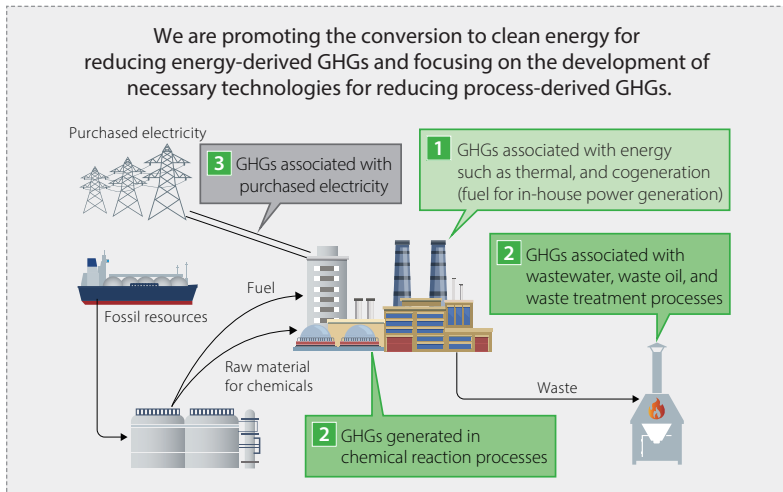


Climate Change Mitigation and Adaptation

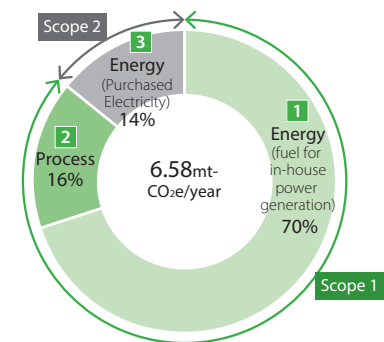
Specific Initiatives for "Obligation"

Major Sources of GHG Emissions from Chemical Plants

The chemical industry is an industry in which raw materials are converted into products through chemical reactions that are driven by electricity, heat from steam, and other forms of energy. Of our GHG emissions in FY2022, 70% came from energy sources such as in-house power generation **1**, 16% came from processes resulting from chemical reactions and waste treatment **2**, and 14% came from energy sources associated with purchased electricity **3**. We aim to reduce GHG emissions by focusing on the conversion to clean energy for energy-derived GHGs and on the development of necessary technologies for process-derived GHGs.



GHG Emissions in FY2022



1 Reduction of GHG from Energy (fuel for in-house power generation): Fuel Conversion

Sumitomo Chemical is working to reduce the Group's GHG emissions as an SBT-certified company. At plants in Japan, we are introducing highly efficient gas turbine generators and decommissioning a number of existing boilers. Aiming to reduce carbon emissions, we are switching from using conventional high CO₂-emission fuels like coal, petroleum coke, and heavy oil to using low CO₂ emission intensity fuels like liquefied natural gas (LNG).

In March 2022, at Ehime Works, Niihama LNG Co., Ltd.* began operating the Niihama LNG Station, which supplies LNG instead of conventional coal or heavy oil. In November 2022, Sumitomo Joint Electric Power Co., Ltd. started operations of the Niihama North Gas-Fired Power Plant, a facility it constructed that uses LNG. The switchover to this power source is expected to result in a 650,000-ton annual reduction in CO₂ emissions in the near future. In addition, we plan to construct highly efficient gas turbine power generation equipment at Chiba Works that uses LNG instead of the existing petroleum coke, looking to complete construction in autumn 2023. With the construction of this equipment, we expect to reduce annual CO₂ emissions by over 240,000 tons (equivalent to around 20% of the CO₂ emitted by Chiba Works). It will also enable the supply of power to neighboring Group companies as we work hard to reduce GHG emissions across the entire Group.

* Funded by Tokyo Gas Engineering Solutions Corporation, Shikoku Electric Power Co., Inc., Shikoku Gas Co., Ltd., Sumitomo Joint Electric Power Co., Ltd., and Sumitomo Chemical

	Ehime region	Chiba region
Fuel	Coals and heavy oil ▶ LNG	Petroleum coke ▶ LNG
Amount of CO ₂ reduction	650,000 tons/year	240,000 tons/year



Niihama North Gas-Fired Power Plant



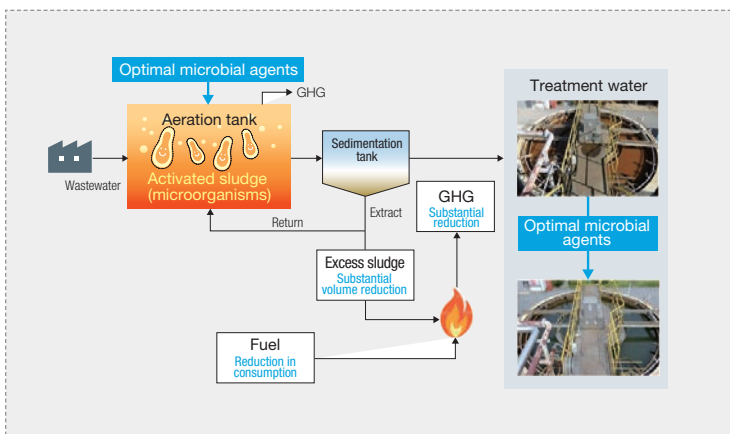
In addition, the following initiatives are being implemented with respect to the conversion from LNG to cleaner fuels.

- Focused on hydrogen and clean ammonia (blue and green), and initiated discussions with Yara, a major foreign ammonia manufacturer, regarding the possibility of its stable procurement.
- In addition, four domestic ammonia suppliers, UBE Corporation, Mitsui Chemicals, Inc., Mitsubishi Gas Chemical Company, Inc., and SUMITOMO CHEMICAL COMPANY, LIMITED have agreed to jointly start discussions to secure a stable supply of clean ammonia, and discussions are ongoing.

We will continue to study the possibility of making each power generation facility cleaner (zero GHG emissions) based on the development status of ammonia and hydrogen combustion technologies, biomass fuel market trends, and regional collaboration efforts.

2 Reduction of Process-derived GHG: Innovations in Wastewater Treatment Technology

Sumitomo Chemical is promoting biotechnological wastewater treatment. Wastewater treatment is an essential initiative to prevent water pollution and promote the recycling and reuse of water resources, but it requires a lot of energy for treatment and generates GHG when excess sludge is incinerated. To address this issue, we have improved wastewater treatment capacity while reducing the amount of sludge generated, GHG emissions associated with wastewater treatment, and fuel consumption through the use of optimal microbial agents.



3 Reduction of GHGs from Energy (purchased electricity): Use of renewable energy

From November 2021, Sumitomo Chemical's Oita Works switched its purchased electric power to 100% renewable energy-derived power, reducing GHG emissions from the Works by around 20%. In addition, at the same Works, we switched the fuel used on site from heavy oil to the low CO₂ emission intensity city gas and are working to optimize the plant operation conditions, achieving a GHG reduction of around 10%. Through these efforts, we realized a total reduction in GHG emissions of around 30% at the Works. (All percentages are in comparison with fiscal 2013.)

Initiatives Aimed at Reducing GHG Emissions at Each Worksite

Each Sumitomo Chemical worksite helps reduce GHG emissions, including in the following ways: installing the latest highly efficient equipment; introducing rationalization and energy-saving measures in production processes; switching to lower-carbon fuels and other forms of energy; installing LED lighting; and soliciting employee suggestions on how to further improve our energy-saving efforts. Furthermore, regarding cleanrooms and other facilities that are highly specialized and difficult to manage, we have launched initiatives in cooperation with experts. Information on the state of these activities is exchanged at Company-wide Energy Manager Meetings, at which representatives from each worksite gather in one location to work on reducing the GHG emissions of the Company as a whole.



State of Installing LED Lighting

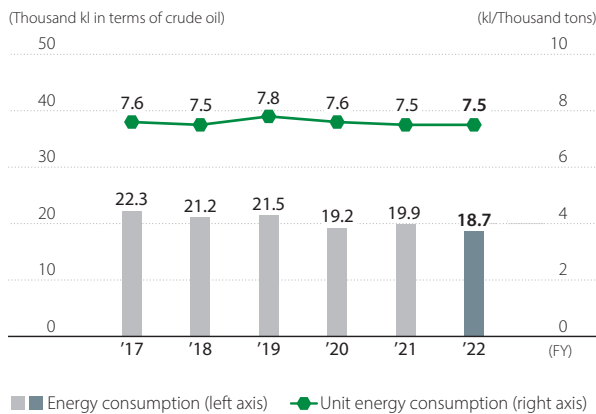
Over 50% of the lighting at all Sumitomo Chemical worksites has already been converted to LEDs, and we achieved the Japan Lighting Manufacturers Association's target of an SSL rate of 50% in 2020. Going forward, we will continue installing LEDs with the aim of achieving a 100% SSL rate in 2030 as a Company-wide initiative.

Logistics Initiatives

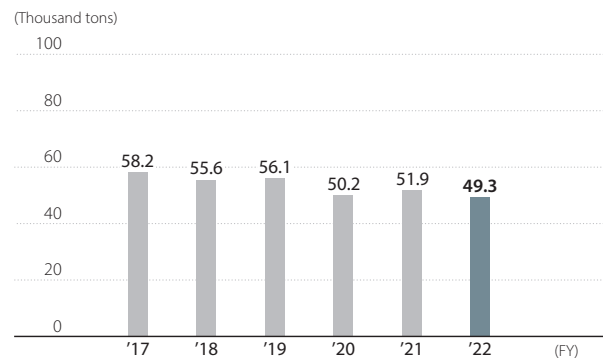
Sumitomo Chemical continues to promote modal shift, or transportation by more efficient and environmentally friendly modes, such as rail and ship instead of trucks. In fiscal 2022, the overall volume of cargo transported fell significantly compared with fiscal 2021. The rate of decrease in intercoastal transport was especially large, and the ratio of truck transport relatively higher. As a result, energy consumption (crude oil equivalent) and carbon dioxide emissions decreased, but unit energy consumption increased 1.3% overall. This was an average 0.2% deterioration over the past five years. We will continue aiming to improve unit energy consumption by our target of 1% or more.

■ Reduction of Environmental Impact in Logistics Operations (Sumitomo Chemical and a Group company in Japan)

Energy Consumption and Unit Energy Consumption



CO2 Emissions



Note: Calculated for Sumitomo Chemical and a Group company in Japan (specified consigner Nippon A&L Inc.)