



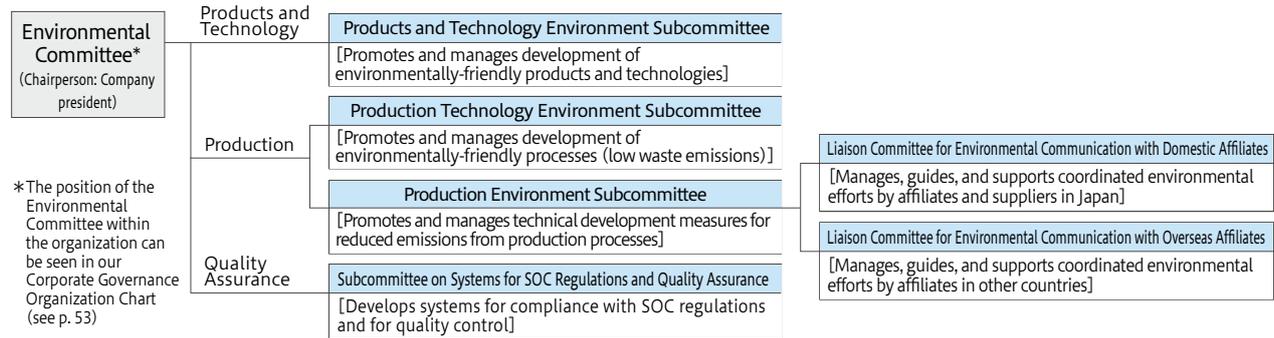
Environmental organization

Our medium- and long-term policy and key action items are discussed and decided in an Environmental Committee chaired by the company president. The Environmental Committee consists of four subcommittees in the areas of products, production, and quality. The subcommittees are further broken down into working groups that promote and manage areas

such as reductions in energy use, waste products, and VOC emissions, and preservation of the environment. In this way, environmental preservation and management activities are conducted from an expert perspective.

Liaison committees have also been established to share information with related companies in Japan and abroad.

Environmental organizational structure



*The position of the Environmental Committee within the organization can be seen in our Corporate Governance Organization Chart (see p. 53)

Deployment from the Environmental Committee and subcommittees to plants and other operations is done with the establishment of expert committees in accordance with the ISO 14001 system at each plant.

Risk and opportunity associated with climate change and resource depletion

The risks and opportunities associated with climate change and resource depletion are recognized as an important management issue. We are working to strengthen our responses to the overall financial and social risks from the effects on economic and production activities of more drastic abnormal weather, changing precipitation patterns, droughts and floods, from a global perspective based on laws, regulations and trends.

	Risk	Opportunity
Climate change	Cost increases from carbon tax and soaring energy prices	Development of lighter weight, next-generation automotive parts, cost reductions from efficient energy use
Resource recycling	Effects of water shortages and floods on production activities	Cost reductions from re-use and decreased use of water
	Cost increases from difficulty in procuring materials, soaring material prices	Cost reductions from recycling technology, use of fewer materials
Management (regulatory compliance)	Loss of trust in the company due to environmental problems, including legal violations, and insufficient efforts to protect the environment.	Raise brand strength by enhancing environmental activities

Resource utilization and environmental emissions in business activities

To lessen the amount of energy, material and other resource inputs, and maximum product output, we are utilizing our skills in product development, process development and workplace

kaizen in efforts to improve through business activities.

The input resources we use include environmentally friendly materials and clean energy.

INPUT

Total material input 45,974t	Rubber (rubber sheet) 17,820t
Plastic 28,154t	Excluding purchased parts, metal and liquid
Total energy input 3,080,000GJ*1	Heavy oil 10,000GJ
Purchased electricity 1,560,000GJ	Kerosene 20,000GJ
City gas 1,310,000GJ	LNG 120,000GJ
LPG 60,000GJ	Gasoline 1,000GJ
Water resource input 1,380,000m ³	Clean water 268,000m ³
Industrial water 737,000m ³	Underground water 375,000m ³
PRTR*2 substances usage 800t	

*1 Gigajoule (1,000,000,000 joules)
 *2 Pollutant Release and Transfer Register
 *3 Sulfur Oxide
 *4 Nitrogen Oxide
 *5 Volatile Organic Compounds

*6 Range of target: 4 plants of Haruhi, Inazawa, Heiwacho and Seto, Kitajima Technical Center, Miwa Technical Center and Sun-Court Inoguchi

OUTPUT

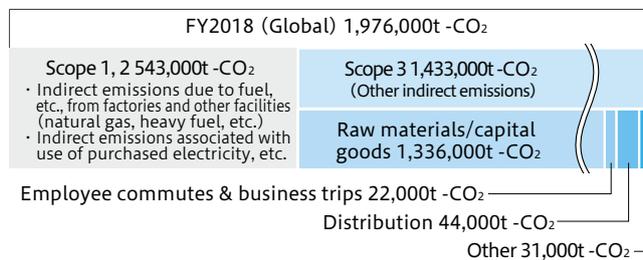
Products	
Emitted into the atmosphere	
CO ₂ 12,900t-CO ₂	Dust 0t
6 gases 3,000t-CO ₂	Volume of substances subject to PRTR 115t
SOx*3 0t	VOC*5 emissions 371t
NOx*4 88t	
Waste discharge	
Landfill waste 0t	General waste 12t
Incinerated waste 7t	For-profit disposal by sale 5,464t
Industrial waste 10,995t	Volume of substances subject to PRTR 61t
Wastewater	
Total wastewater 890,000m ³	Nitrogen emissions*6 9.7t
Volume of substances subject to PRTR 0.15t	Phosphorus emissions*6 0.6t
	COD emissions*6 4.8t

Environmental impact in the value chain

From the perspective of preserving the earth, we have surveyed and disclosed not only GHG emissions (Scope 1*¹, Scope 2*²) in our business activities but also emissions in our entire value chain including excavation of raw materials and product use and disposal (Scope 3*³). To increase precision for a more accurate picture, we reviewed the calculation method and data collection for Scope 3.

*1 Greenhouse gas emissions emitted directly by the company itself (natural gas and other fossil fuels, etc.)
 *2 Indirectly emitted greenhouse gases (electricity, etc.)
 *3 Greenhouse gases emitted in the supply chain that are indirectly emitted by the company (manufacturing, transport, business travel, commuting, etc.)

CO₂ Emissions by Scope Level



Building low-carbon societies

In addition to lighter weight products that lead to improved vehicle fuel efficiency, we are reducing CO₂ emissions through improved productivity and more efficient distribution.

Basic philosophy

Keeping the rise in global temperature to below 2°C, as concluded in the Paris Agreement, is crucial and we must achieve greenhouse gas emissions of essentially zero by the end of the century. With the aim of minimizing CO₂ emissions as presented in the TG 2050 Environmental Challenge, we are utilizing new production techniques and product development skills with an eye toward next-

generation vehicles in addition to the manufacturing skills we have cultivated over time. Plans for execution are included in our 6th Environmental Action Plan with activity targets for FY2020. We are now formulating our mid-range targets and scenarios for FY2030. To reduce CO₂ emissions over the entire product lifecycle, we are making efforts to increase efficiency in distribution and other areas.

Reducing CO₂ emissions

The Toyota Gosei Group is reducing CO₂ emissions (per unit sales) in the product stage, production stage, and over the entire lifecycle to achieve the targets set for FY2020.

● Product development stage: Environmentally-friendly product development

In the product stage, we are making headway in providing parts for environmentally-friendly, next-generation vehicles and developing products with lighter weight for greater fuel efficiency and lower energy consumption across the areas of materials technology, product design, and production technology. Examples include switching

materials (e.g., from metal or rubber to plastic) in instrument panel peripherals and other interior products as well as in functional parts such as hoses, reducing the number of components, integrating functions, and using thinner material while ensuring strength.

● Production stage: Reductions with development of new processes, daily *kaizen*

In the production stage, we are developing new production techniques that minimize energy usage and introducing energy-saving equipment through the Production Engineering Technology Environment Subcommittee started in fiscal 2016.

We also conduct regular *kaizen* to thoroughly eliminate waste. Today, the TG ESCO (expert team that conducts reduction activities with *genchi-genbutsu*) formed in 2016 is conducting *kaizen* activities that include the latest technologies and collecting and applying information on best practices from other companies.

● Recycling: Reductions in materials and parts procurement, more efficient distribution

Toyota Gosei has prepared and distributed green procurement guidelines for materials and parts procurement with low environmental impact. Together with regular supplier surveys to ensure compliance, we also provide support when improvements are needed.

We are also making active efforts to reduce CO₂ emissions over the lifecycle with more efficient distribution, including reviews of truck allocation and transport modes with the aim of improving truck payloads and shortening distribution lines.

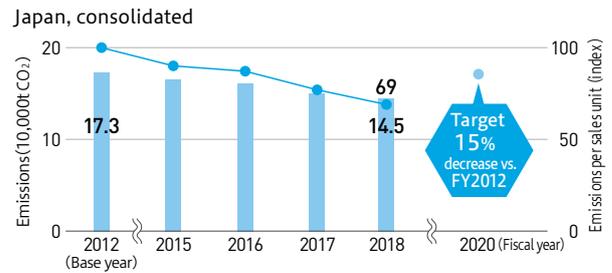
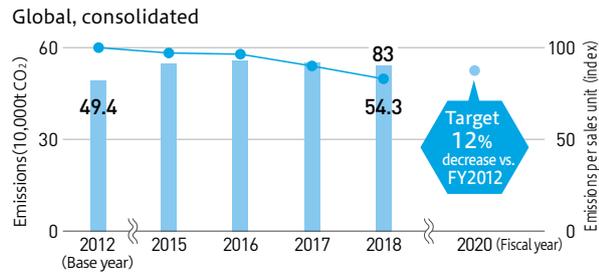


• Renewable energy

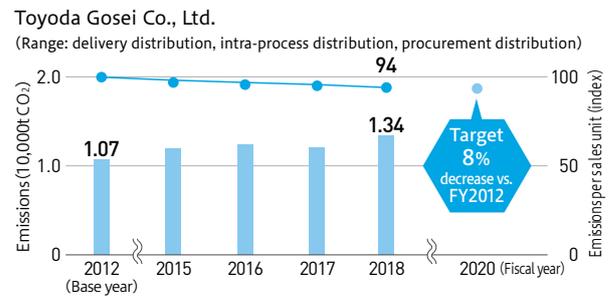
We are moving toward a target of using renewable energy equivalent to 2% of our total global electricity consumption by FY2020. This includes installation of solar

and wind clean energy generation equipment and the purchase of green power. Our next challenge is to raise clean energy levels to at least 20% globally by FY2030.

CO₂ emissions, CO₂ emissions per sales unit (index) *4



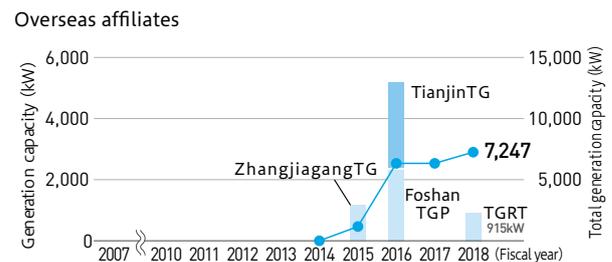
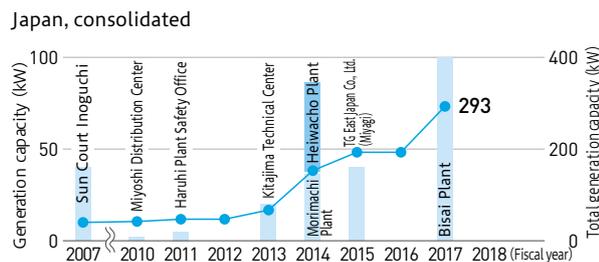
CO₂ emissions in distribution, CO₂ emissions per sales unit (index) *4



*4 Emissions per sales unit (index) is a figure obtained taking FY2012 as 100 [CO₂ conversion factor] The CO₂ conversion factors used for Japan *5 are the 1990 Keidanren factors. The CO₂ conversion factors used for other countries are from the GHG Protocol (2001).

*5 Electricity: 0.3707t-CO₂/MWh, class A fuel oil: 2.69577t-CO₂/kL, LPG: 3.00397t-CO₂/t, town gas: 2.15701t-CO₂/1,000 Nm³, kerosene: 2.53155 t-CO₂/kL, LNG: 2.68682t-CO₂/t, gasoline: 2.36063t-CO₂/kL (excluding external factors of gas companies' town gas heat conversion)

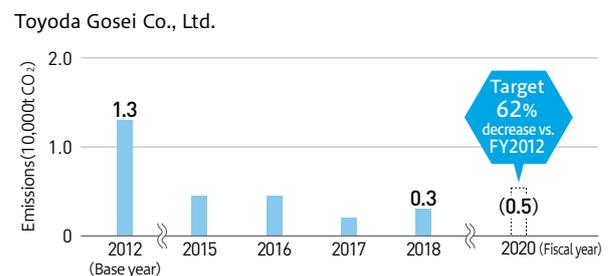
Solar power generation graph (does not include stand-alone systems such as outside lights with solar panels)



Reductions in 6 greenhouse gases *6

Of the six greenhouse gases, Toyoda Gosei Co., Ltd. uses three (HFC, PFC, SF₆) and is conducting activities to reduce all of them. By FY2015 we had completed a switch to alternative gases with a low environmental impact for the shield gas used in the production of steering wheel cores and other gases. This has resulted in an 74% decrease in greenhouse gases since FY2012. We will continue these reduction activities in the future.

Trend in greenhouse gas (6 gases) emissions (CO₂ equivalents)



*6 Hydrofluorocarbon (HFC), perfluorocarbon (PFC), sulfur hexafluoride (SF₆), methane (CH₄), nitrous oxide (N₂O), nitrogen trifluoride (NF₃)