


The Environment

## Aiming for a Sustainable Society and a Sustainable World

The JTEKT Group has positioned the environment as one of its main management issues.

In order to realize a sustainable society through “No. 1 & Only One” business activities, in June 2020, we formulated an “environmental philosophy” consisting of the environmental slogan “All for One Earth” and the JTEKT Environmental Action Guidelines. We have been promoting measures that contribute toward the realization of a sustainable society and earth through a promotional framework in which JTEKT Corporation and the JTEKT Group as a whole work together as one.

### Environmental Philosophy



**Environmental Philosophy**

JTEKT and the JTEKT Group companies aim to realize a sustainable society through “No. 1 & Only One” business activities.

**All for One Earth**  
— For our irreplaceable Earth —

**[JTEKT Environmental Action Guidelines]**  
Based on the JTEKT Medium to Long-term Plan, we will make continuous improvement to our environmental management system and strive to achieve environmental targets and performance.

1. Comply with environmental laws and regulations, and address pollution prevention
2. Reduce substances with environmental impact, such as CO<sub>2</sub> and chemical substances, toward low-carbon and recycling-oriented societies
3. Work to protect biodiversity and ecosystems in harmony with local communities

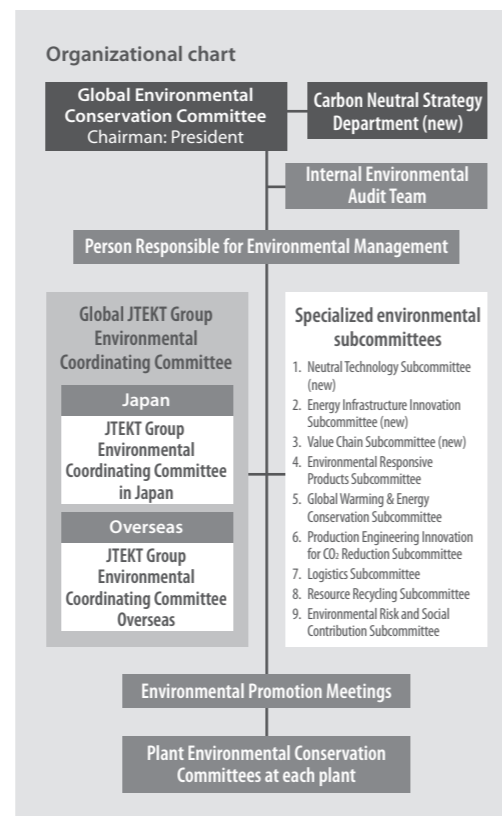
June 25, 2020  
JTEKT CORPORATION  
Companywide Environment Supervisor  
**Makoto Sano**

### Promotional structure

Council for Enhancement of Corporate Value

JTEKT is working to improve its environmental management under the Council for Enhancement of Corporate Value, which is chaired by the president. The council sets targets based on company policy, deliberates and decides on measures, and tracks milestones. To flexibly respond to issues related to our business activities, we have established six dedicated environmental subcommittees and have been working to achieve the goals of Environmental Challenge 2050. In addition, to achieve carbon neutrality as soon as possible, in fiscal 2021 we established the Carbon Neutral Strategy Department as a companywide and cross-sectional organization reporting directly to the president. We are accelerating our efforts to become carbon neutral by establishing three new environmental subcommittees to implement specific measures for each initiative.

We are working to further strengthen our environmental management, not only at JTEKT but also at our 20 Group companies in Japan and 39 Group companies overseas.



### Global environmental management

### Environmental Challenge 2050: Philosophy and guidelines

With the goal of realizing a sustainable society in line with the vision of “For the children of the future,” JTEKT formulated the Environmental Challenge 2050 guidelines for measures aimed at minimizing JTEKT’s environmental footprint by 2050. The JTEKT Group’s Environmental Challenge 2050 is based around five key pillars—Products / Technologies, Creation of a low-carbon society, Creation of a recycling-based society, Harmony with nature / Biodiversity, and Environmental management—and the JTEKT Group is working together as one to take up the challenge of minimizing its environmental footprint and maximizing environmental value.

### Environmental Challenge 2050

Formulated and announced in May 2016

Category	Guideline
<b>1. Products / Technologies</b>	Contribute to the building of an environmentally friendly society using our capabilities in the development of products and technologies • Actively promote the development of products that are expected to contribute toward reducing the burden on the environment, including components for fuel cell electric vehicles (FCEVs), etc.
<b>2. Creation of a low-carbon society</b>	Work to minimize CO <sub>2</sub> emissions throughout the product life cycle, from materials and component procurement through to design, manufacturing, and eventual disposal Work to minimize CO <sub>2</sub> emissions from factories engaged in the manufacturing of products by 2050 • Expand the development and adoption of innovative new processes and production equipment • Implement day-to-day improvements and enhance the efficiency of production equipment at our factories • Shift over to the use of renewable energy, hydrogen energy, etc.
<b>3. Creation of a recycling-based society</b>	Work to minimize emissions and expand recycling at the production stage • Implement source control measures (including yield enhancement, etc.) and use strengthened separation measures, etc., to enhance the value of waste materials (generation of valuable resources) • Effectively utilize recycled materials and expand internal recycling Work to minimize water usage through the cyclical utilization of water used in our factories, etc., and ensure that wastewater discharged from our factories is discharged in a cleaner state
<b>4. Harmony with nature / Biodiversity</b>	Promote activities aimed at fostering harmony with nature and protecting ecosystems, not only on a JTEKT-wide basis but also in collaboration with the Toyota Group and with government agencies and NPOs
<b>5. Environmental management</b>	Build a corporate culture and cultivate professionals oriented toward actively conserving the earth’s environment • Strengthen employees’ environmental awareness and cultivate people who can make a positive contribution to the environment, both within and outside the company • Expand the implementation of global-scale environmental activities

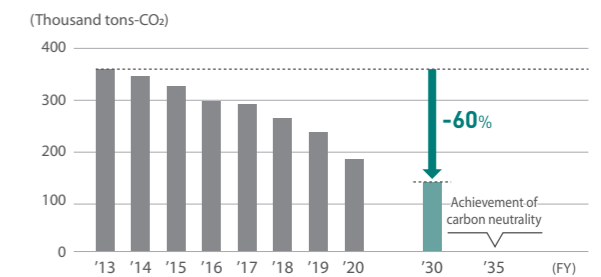
### Formulation of the next medium-term targets

### Setting the total CO<sub>2</sub> emission target for 2030

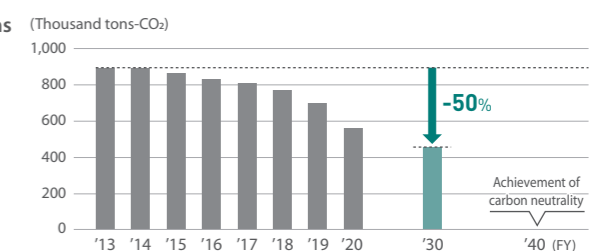
JTEKT has set medium- to long-term targets for 2030 as a milestone toward the achievement of the minimization of CO<sub>2</sub> emissions as set out in Environmental Challenge 2050.

The total emission target is a 1.5°C goal, which is consistent with the 2°C goal agreed on in the 2016 Paris Agreement (to limit global warming to well below 2°C, preferably to 1.5°C, compared to pre-industrial levels). The global CO<sub>2</sub> reduction target is 50% compared to fiscal 2013, and the CO<sub>2</sub> reduction target for the JTEKT parent is 60% or more compared to fiscal 2013. We aim to achieve this through energy reduction by production technology innovations, daily improvement at plants, and the introduction of renewable energy.

### Overall JTEKT nonconsolidated CO<sub>2</sub> reductions



### Overall global CO<sub>2</sub> reductions



[Conversion coefficient used to calculate CO<sub>2</sub> emissions]

With regard to the management of CO<sub>2</sub> emissions per unit of production output, we have adopted a conversion coefficient that facilitates assessment of the results achieved in the company’s improvement efforts.

For overall emissions management, to ensure that CO<sub>2</sub> emissions data more closely reflects the actual situation, calculation is performed using the market-based conversion coefficient specified by the individual electric power company for the year in question.

Environmental Action Plan 2025

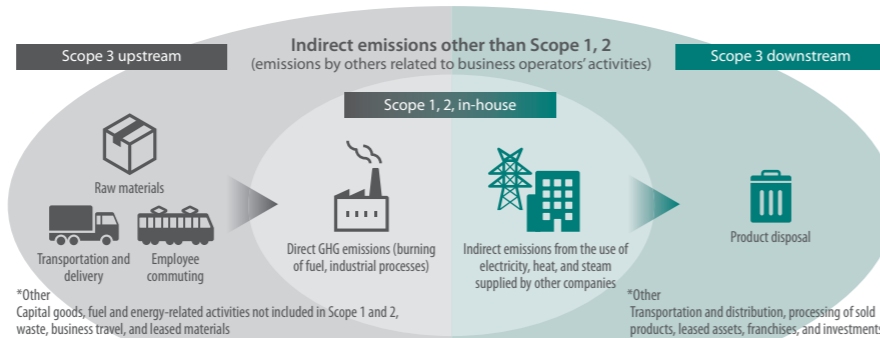
To promote environmental conservation activities within the JTEKT Group to achieve Environmental Challenge 2050, JTEKT worked on various energy-saving measures based on 2020 Environmental Action Plan, which was formulated as the first step until fiscal 2020. From fiscal 2021 onward, we will promote measures to achieve the goals set in Environmental Challenge 2050 based on Environmental Action Plan 2025, which was formulated as the second step.

Challenge goals are in parentheses.

Category	Implementation	Item	Base year	FY2025 targets
Products and technologies	Global	Contribution to CO <sub>2</sub> emissions reduction through products	—	1,650,000 t
Building a low-carbon society	JTEKT non-consolidated	CO <sub>2</sub> emissions	FY2013	25% reduction (35% reduction)
		CO <sub>2</sub> emissions from logistics	FY2013	25% reduction
		Renewable energy introduction rate	—	More than 15%
	Global	CO <sub>2</sub> emissions	FY2013	18% reduction (30% reduction)
Building a recycling society	JTEKT non-consolidated	Renewable energy introduction rate	—	More than 10%
		Recycling rate	—	More than 99%
		Basic unit of waste	FY2018	7% reduction
		Basic unit of water usage	FY2018	7% reduction
	Global	Basic unit of packaging material	FY2018	7% reduction
		Recycling rate	—	More than 90%
		Basic unit of waste	FY2018	7% reduction
Coexistence with nature and biodiversity	Global	Basic unit of water usage	FY2018	7% reduction
		Number of biodiversity conservation effort participants	—	More than 3,000 persons/year

For more information: <https://www.jtekt.co.jp/e/sustainability/environment/topics/>

To achieve the minimization of CO<sub>2</sub> emissions set out in the JTEKT Environmental Challenge 2050, we have established a carbon neutral target of net zero emissions by 2040. JTEKT is committed to achieving carbon neutrality not only in terms of its own emissions (Scope 1 + 2), but also in terms of the life-cycle CO<sub>2</sub> emissions of its products, including those of its suppliers and others. In August 2021, we established the Carbon Neutral Strategy Department, which reports directly to the president, and organized three new subcommittees as dedicated environmental subcommittees to work in various directions to achieve carbon neutrality as early as possible.



**JTEKT's Policy Regarding Initiatives**

**Aiming to achieve carbon neutrality in the entire supply chain**

	Scope 3 upstream Amount reduced through own efforts	Scope 1, 2, in-house Own plants + others' products	Scope 3 downstream Amount reduced through own efforts
Own efforts	<ul style="list-style-type: none"> <li>Reduce purchase volume</li> <li>Improve the efficiency of logistics</li> <li>Lower the weight reduction of products</li> <li>Shift to remote</li> </ul>	<ul style="list-style-type: none"> <li>Energy saving (ongoing)</li> <li>Renewable energy</li> <li>Energy conversion</li> <li>CO<sub>2</sub> capture</li> <li>Reduce the amount of waste</li> </ul>	<ul style="list-style-type: none"> <li>Make products lighter</li> <li>Improve product efficiency</li> <li>Reduce friction, etc.</li> </ul>
Reliance on others	<ul style="list-style-type: none"> <li>Conversion to electric power for logistics vehicles</li> <li>Energy conversion</li> </ul>	<ul style="list-style-type: none"> <li>Renewable energy</li> <li>Energy conversion</li> <li>CO<sub>2</sub> capture</li> </ul>	

Council for Enhancement of Corporate Value	Carbon Neutral Strategy Department
(New) Neutral Technology Subcommittee	Domain: New energy carriers, distributed power sources, CO <sub>2</sub> resource recovery
(New) Energy Infrastructure Innovation Subcommittee	Domain: Introduction of hydrogen and ammonia, renewable energy; construction of energy infrastructure
(New) Value Chain Subcommittee	Domain: Understanding supply chain emissions and supporting CO <sub>2</sub> reduction activities
Environmental Responsive Products Subcommittee	Domain: Simplification of products, reduction of component types, reduction of size and weight, reduction of friction, and improvement of performance
Production Engineering Innovation for CO <sub>2</sub> Reduction Subcommittee	Domain: Monozukuri innovation, heat treatment, cost reduction
Global Warming & Energy Conservation Subcommittee	Domain: Daily improvements, field trials of new technologies
Resource Recycling Subcommittee	Domain: 3Rs, saving resources (primary materials, secondary materials)
Logistics Subcommittee	Domain: Efficient logistics, electrification of logistics vehicles, reduction of packaging materials

The Environment

Participation in the TCFD

The identification of medium- to long-term climate-related risks and opportunities and the disclosure of information to stakeholders that assesses the resilience of company initiatives is required for corporations that are able to grow sustainably. Accordingly, in 2018, we endorsed and announced our support for the final report recommendations by the Task Force on Climate-related Financial Disclosures (TCFD), which was established by the G20 Financial Stability Board (FSB). We are disclosing our approach to climate change in accordance with the TCFD recommendations. Going forward, we will select multiple scenarios for analysis, including the International Energy Agency's 2°C scenario (2DS), below 2°C scenario (B2DS), and the scenario in which climate change countermeasures do not progress. These will be applied to establish our "social image" and identify climate-related risks and opportunities and then evaluate the adaptability (resilience) of our initiatives. In addition, we will consider assessing and disclosing the financial impact of climate-related risks and opportunities.

For more information: [https://www.jtekt.co.jp/e/sustainability/environment/efforts/low\\_carbon/](https://www.jtekt.co.jp/e/sustainability/environment/efforts/low_carbon/)

Concrete measures adopted in fiscal 2020

Resource inputs and outputs

JTEKT quantitatively understands resources and energy use as inputs and emissions into the environment as outputs. To minimize the impact of global warming associated with business activities, we work to reduce energy focused on processes requiring high energy consumption such as casting, forging, heat treatment and machining. As for resources, approximately 7% of the raw material input is recycled materials and about 11% is discharged as valuable resources. We are promoting the effective use of resources by further improving the yield.

Resource / energy inputs and environmentally hazardous substance emissions

INPUT		Manufacturing	OUTPUT	
Resource and energy inputs		Casting	Environmentally hazardous substance emissions	
Raw materials			Emissions into the atmosphere	
Total	271 thousand t		CO <sub>2</sub>	681 thousand t-CO <sub>2</sub>
Steel	256 thousand t		SO <sub>x</sub>	31 t
Aluminum ingots	7 thousand t		NO <sub>x</sub>	32 t
Resin pellets	1 thousand t		Toluene and xylene	26 t
Fuel oil and processing oil	5,411 kl		Emissions of other substances subject to PRTR	18 t
Grease	2 thousand t		Discharge to bodies of water and sewers	
Paint	0 thousand t		Total amount of wastewater	3,754 thousand m <sup>3</sup>
Resource circulation amount	18 thousand t		(By release destination)	
Energy		Surface water	2,763 thousand m <sup>3</sup>	
Total	14,572,499 GJ <sup>1)</sup>	Groundwater	45 thousand m <sup>3</sup>	
Electricity	1,264,953 MWh	Seawater	73 thousand m <sup>3</sup>	
Renewable energy power generation	16,424 MWh	Others (sewer, etc.)	872 thousand m <sup>3</sup>	
City gas	36,629 thousand Nm <sup>3</sup>	Machining	COD <sup>4)</sup>	22 t
LPG	4,399 t		Nitrogen	7 t
Kerosene	517 kl	Painting	Phosphorus	0.3 t
Heavy oil A <sup>2)</sup>	181 kl		Release or transfer amount of substances subject to PRTR	0 t
Water		Assembly	External waste	
Total	4,814 thousand m <sup>3</sup>		Waste	2 thousand t
(By water source)			Reverse payment recycling <sup>5)</sup>	36 thousand t
Surface water	1,114 thousand m <sup>3</sup>		Sales recycling	123 thousand t
Groundwater	1,609 thousand m <sup>3</sup>	Finished product	Hazardous waste <sup>6)</sup>	5 thousand t
Others (city water, industrial water, etc.)	2,091 thousand m <sup>3</sup>		Transfer amount of substances subject to PRTR	13 t
Amount of water recycled	872 thousand m <sup>3</sup>	Automotive parts		
Chemical substances (amount of substances handled subject to PRTR <sup>3)</sup> )		Bearings		
Total	63 t	Machine tools		
Logistics		Mechatronic products		
Packaging	101 thousand t			

■ JTEKT and 20 domestic Group companies, 39 overseas Group companies  
 ■ JTEKT and 20 domestic Group companies  
 ■ JTEKT nonconsolidated

<sup>1)</sup> 1 Gigajoule (unit showing heat quantity) G=109

<sup>2)</sup> Of the heavy oils classified into three types (A, B, and C), the consistency is closest to light oil and is used as fuel for boilers and heating.

<sup>3)</sup> Abbreviation for Pollutant Release and Transfer Register, which is a system for reporting and announcing the amount of chemical substances released into the environment to the authorities.

<sup>4)</sup> Chemical oxygen demand (index showing the degree of water pollution).

<sup>5)</sup> Recycling involving the payment of disposal fees.

<sup>6)</sup> Extracted (amount of waste and reverse payment recycling) from the amount of waste regulated as specially controlled industrial waste in Japan and dangerous waste in accordance with the laws in countries other than Japan from the amount of waste discharged.

Third-party verification

In order to increase the reliability of data disclosure, JTEKT has undergone a third-party verification by SGS Japan Inc., with regard to results for fiscal 2020. The scope of this verification includes JTEKT's manufacturing sites, domestic Group companies and some overseas affiliates covered by Scope 1, Scope 2 emissions, water usage and waste emissions, Scope 3 Category 6 (business trips), Category 7 (employee commuting) and Category 11 (use of products sold).

For more information: <https://www.jtekt.co.jp/e/sustainability/environment/efforts/management/>



The Environment

Energy-saving, high-precision casting method development

Advancement and lateral development of hybrid liquification and holding furnace

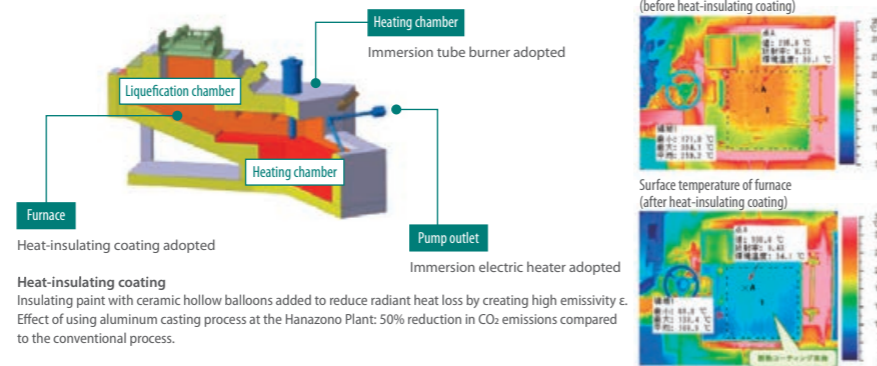
Energy visualization and energy-saving initiatives

Introduction of renewable energy

Overseas affiliated companies JAMY (Malaysia) KLF (China)

Received the 2020 Energy Conservation Grand Prize "Agency for Natural Resources and Energy Commissioner's Award"

We have improved thermal efficiency, and reduced CO<sub>2</sub> emissions by 50% compared to the conventional system by downsizing the furnace body and highly insulating it to reduce the amount of heat dissipation. This was also accomplished by adopting an immersion tube burner and immersion heater to eliminate the holding burner. In addition, JTEKT is working on high-precision casting by improving molds, which contributes to energy conservation by reducing the switchovers in the downstream process.



From 2016 to 2017, JTEKT developed an energy visualization environment to monitor energy usage on the main production lines at all plants. To create new energy-saving items and improve the levels of our energy efficiency and energy-saving diagnostic engineers, in fiscal 2020 our in-house diagnostic team examined the Kariya Plant and our Group company Toyooki Kogyo Co., Ltd. In fiscal 2021, our in-house team will conduct another round of diagnostics at the Shikoku Plant and two domestic Group companies.

In fiscal 2020, a total of 3,151 kW of photovoltaic power generation systems were installed at all five plants in Japan, China, and Malaysia, reducing annual CO<sub>2</sub> emissions by 1,340 tons.

As a result, the amount of renewable energy introduced by the JTEKT parent was 2.27 MW and by 17.5 MW for the entire Group.

To reduce CO<sub>2</sub> emissions, JTEKT will continue to work proactively to achieve a renewable energy adoption rate\* of 25% or more for the JTEKT parent and 20% or more for the entire Group by 2030.

\* Renewable energy adoption rate = amount of renewable energy generated / amount of electricity used

Main activities

A photovoltaic power generation system totaling 240 kW was installed at the Hanazono Plant in fiscal 2020. The Hanazono Plant has thus installed a total of 1,168 kW of photovoltaic power generation, which together with the amount installed to date, covers approximately 6% of its total power usage with renewable energy. JTEKT AUTOMOTIVE (MALAYSIA) SDN. BHD. (JAMY) in Malaysia and KOYO LIOHO (FOSHAN) AUTOMOTIVE PARTS CO., LTD. (KLF) in China have installed photovoltaic power generation systems of respectively 858 kW and 2,053 kW, respectively. In China, a total of 6,564 kW has been installed, and roughly 5% of the total electricity consumption is covered by renewable energy.

JTEKT will continue to work on introducing renewable energy sources that have less of an impact on the environment and create plants that operate in harmony with nature.



JTEKT received the "Agency for Natural Resources and Energy Commissioner's Award (Small Group Activity Field)" for its "CO<sub>2</sub> Zero Challenge". The award is a part of the "2020 Energy Conservation Grand Prize (Energy Conservation Case Category)" sponsored by the Energy Conservation Center, Japan. The "Energy Conservation Grand Prize" recognizes businesses and its establishments that are promoting excellent energy-saving efforts, products with excellent energy-saving properties, and business models. This time, our "CO<sub>2</sub> Zero Challenge" was highly evaluated, and this was the first award for us.

JTEKT has been promoting efforts to minimize CO<sub>2</sub> emissions based on the Environmental Challenge 2050, and the award is the improvement of the field in the "CO<sub>2</sub> Zero Challenge" that we have been working on since 2016. The results of significant energy conservation reductions centered on this were highly evaluated. The JTEKT Group will continue to work as one to take on the challenge of realizing "Environmental Challenge 2050" under the JTEKT environmental philosophy of "All for One Earth."



Received the 2020 Energy Conservation Grand Prize "Agency for Natural Resources and Energy Commissioner's Award"

Major ESG<sup>1</sup> Data

			Unit	FY2018	FY2019	FY2020	
<b>Products [Consolidated]</b>	Contribution to CO <sub>2</sub> emissions reduction <sup>2</sup>	Total	1,000t	816.0	830.0	<b>812.3</b>	
	Product group examples	Steering <sup>3</sup>	1,000t	370.0	361.6	<b>327.1</b>	
		Bearings <sup>4</sup>	Tapered roller bearings for automobiles	1,000t	115.0	108.4	<b>85.0</b>
<b>R&amp;D [Consolidated]</b>	Total cost of R&D <sup>5</sup>		Billions of yen	636	647	<b>521</b>	
<b>R&amp;D [Nonconsolidated]</b>	No. of patents pending <sup>6</sup>		Incidents	614	611	<b>498</b>	
	No. of patents acquired <sup>6</sup>		Incidents	334	320	<b>323</b>	
<b>Quality [Nonconsolidated]</b>	No. of visitors to quality exhibitions (Total) <sup>7</sup>		People	9,237	10,374	<b>8,267</b>	
<b>Environment [Consolidated]</b>	Prevention of global warming	CO <sub>2</sub> emissions for internal production	1,000t	807	753	<b>677</b>	
		CO <sub>2</sub> emissions for internal production	1,000t	217	205	<b>177</b>	
<b>Environment [Nonconsolidated]</b>	Prevention of global warming	CO <sub>2</sub> emissions in production per in-house production volume	t/Billions of yen	131.1	126.3	<b>129.4</b>	
		CO <sub>2</sub> emissions in logistics	1,000t	12.2	10.7	<b>8.6</b>	
		CO <sub>2</sub> emissions in logistics per revenue	t/Billions of yen	1.82	1.65	<b>1.63</b>	
		Effective use of resources	Waste per in-house production volume	t/Billions of yen	6.20	6.26	<b>5.97</b>
	Packaging usage per revenue	t/Billions of yen	0.75	0.78	<b>0.69</b>		
	Water usage per in-house production volume	1,000m <sup>3</sup> /Billions of yen	1.35	1.29	<b>1.34</b>		
<b>Environment [Nonconsolidated]</b>	Reduction and management of environmentally burdensome materials	Release / transfer of substances subject to PRTR	t	27.1	25.7	<b>33.5</b>	
		No. of environmental issues	Incidents	2	0	<b>0</b>	
<b>Employees [Consolidated]</b>	Ratio of foreigners occupying key positions in overseas locations		%	65.7	74.1	<b>75.8</b>	
<b>Employees [Nonconsolidated]</b>	Level of understanding by employees of own division's vision <sup>8</sup>		%	68.0	86.3	<b>—</b>	
	Female employee percentage		%	10.8	10.3	<b>10.59</b>	
	Percentage of women in administrative positions	Managerial positions		%	1.07	1.20	<b>1.20</b>
		Assistant managers		%	4.69	5.15	<b>5.61</b>
	Percentage of employees with disabilities		%	2.17	2.24	<b>2.23</b>	
	Employees who took childcare leave		People	60	68	<b>102</b>	
	Employees who took family care leave		People	5	6	<b>4</b>	
Percentage of vigorous and vibrant workplaces <sup>9</sup>		%	21.4	18.2	<b>29.5</b>		
<b>Governance [Nonconsolidated]</b>	No. of internal reports made		Incidents	49	35	<b>47</b>	
<b>Local contribution [Nonconsolidated]</b>	No. of youth development <sup>10</sup>		People	1,627	1,288	<b>69</b>	
	No. of information get-togethers with local community		Place	13	13	<b>8</b>	
	No. of participants in region cleanup activities		People	4,861	3,178	<b>721</b>	

\*1 Acronym that stands for environmental, social and governance. Used as an indicator to determine whether or not a company can grow sustainably.

\*2 Amount of CO<sub>2</sub> reduction in the use stage of product by environmental design. The amount calculated globally is shown in a single year. The calculation method has been partially changed since FY2016.

\*3 Figure is calculated based on the number of products designed by JTEKT therefore products produced overseas are included.

\*4 Nonconsolidated

\*5 R&D costs included in general administrative costs and manufacturing costs.

\*6 Starting from the disclosures for fiscal 2018, the information is disclosed on a nonconsolidated basis, including historical data.

\*7 The Quality Denshokan (Quality Museum) started on JTEKT's internal website in fiscal 2018; the figures listed are number of visits to the site during Quality Month.

\*8 Surveys of the level of understanding were not conducted in fiscal 2020.

\*9 Based on internal employee survey results

\*10 Number of participants of elementary school, junior high school, and high school students

Third-Party Evaluations

In light of our efforts and information disclosure in the ESG areas, JTEKT has been selected for inclusion in FTSE Russell's FTSE4Good Index Series, FTSE Blossom Japan Index, and SOMPO Asset Management Co., Ltd.'s SOMPO Sustainability Index.

Also, within the corporate survey conducted by CDP<sup>11</sup>, in fiscal 2020 we received an A- in the climate change and A- (up from B in fiscal 2019) in the water security categories.

Going forward, through our CSR activities, we will contribute to sustainable societies and strive to sustainably enhance our corporate value.



<https://www.ftserussell.com/ja>



\*11 CDP: Representing global institutional investors, the NGO CDP provides information disclosure on corporate activities with regard to climate change, water, and forest resources, using an eight-level assessment (A–D) with regard to company responses.