

Standards for Calculating Environmental Performance Indicators

[1] For the period April 1, 2017 to March 31, 2018

[2] Calculation performed with reference to *Environmental Reporting Guidelines*, 2012 Edition, Ministry of the Environment.

INPUT	Environmental performance indicator	Standards for calculation, etc.	Calculation method, etc.
Procurement	Procurement rate for environmentally conscious products (%)	–	Value of environmentally conscious products procured divided by value of all products procured Environmentally conscious products: recycled paper and non-chlorine bleached pulp paper; forest-certified and other paper; biodegradable and recycled film and other plastics; plant oil-based ink, recycled solvents, and other environmentally certified products
	Energy consumption (kl or TJ)	Act on the Rational Use of Energy Act on Promotion of Global Warming Countermeasures	Total of all energy consumed annually × calorie conversion factor for each energy type Calorie conversion factors for city gas are calculated according to the caloric values in Appendix 4, “List of City Gas Suppliers and Supplied Quantity of Heat” (revised April 15, 2013) of the Requirements for Filling Out Periodic Reports Based on Articles 15 and 19-2 of the Act on the Rational Use of Energy. For other types of energy, calculations were performed using the caloric values listed in the revised Act on Promotion of Global Warming Countermeasures (an enforcement ordinance issued on March 31, 2010 by the Ministry of the Environment and the Ministry of Economy, Trade and Industry).
Electricity (million kWh)	Electric power annual procurement		
City gas (million Nm ³)	Annual procurement of city gas		
LPG (million kg)	LPG annual procurement		
LNG (million kg)	LNG annual procurement		
Fuel oil, kerosene, diesel fuel, gasoline (kl)	Annual fuel procurement		
Steam (TJ)	Annual steam procurement		
Water consumption (million m ³)	–		Annual consumption of municipal water, well water, and industrial water
Input volume of principal raw materials (kt)	–		Total weight of paper, plastic, ink, metals, etc., used in production plants
Principal secondary materials (kt)	–	Total weight of solvents, acids, alkalis, etc., used in production plants	
Distribution	Energy usage during shipment of goods (kl)	Act on Promotion of Global Warming Countermeasures	Calculation of petroleum energy used in shipping in accordance with the Act on Promotion of Global Warming Countermeasures
Recycling	Recycled solvent (kt)	–	Utilization of recycled solvents in own and externally contracted production facilities
	Recycled acid and alkaline (kt)	–	Utilization of recycled solvents in own and externally contracted production facilities
	Recycled water (million m ³)	–	Water recycled or recirculated in own production plants
	Vapor generated from waste heat recovery (tons)	–	Steam generated through heat from odor reduction equipment and furnaces

OUTPUT	Environmental performance indicator	Standards for calculation, etc.	Calculation method, etc.
Atmospheric emissions	GHG emissions (kt-CO ₂ equivalent)	Act on the Rational Use of Energy Act on Promotion of Global Warming Countermeasures	GHG emissions from electric power consumption, fuel consumption and combustion, waste incineration, and from emissions to the atmosphere of HFC, PFC, and SF ₆ are calculated for city gas according to the calorific and emission values in Appendix 4, "List of City Gas Suppliers and Supplied Quantity of Heat" (revised April 15, 2013) of the Requirements for Filling Out Periodic Reports Based on Articles 15 and 19-2 of the Act on the Rational Use of Energy. For other forms of energy, calculations were made using calorific and emissions values listed in the revised Act on Promotion of Global Warming Countermeasures (an enforcement ordinance published March 31, 2010 by the Ministry of the Environment and the Ministry of Economy, Trade and Industry). Note, however, that electricity emission factors from electricity consumption for the past year were calculated using the Federation of Electric Power Companies of Japan's 2005 emissions unit as detailed on page 20. Emissions for offshore sites were calculated using factors drawn from sources such as the Greenhouse Gas Protocol and the U.S. Department of Energy.
	SOx emissions (tons)	Air Pollution Control Act, etc.	Calculated for equipment using liquid fuel (fuel oil or kerosene), based on emission volume per unit of time and hours of operation Sulfur oxides (Nm ³ /h) × annual hours of facility operation (h) × 64/22.4 × 10 ⁻³
	NOx emissions (tons)		Calculated using the formula for NOx emissions in the calculation graph from the "Environmental Activity Evaluation Program," Ministry of the Environment, 1999
	Dichloromethane (tons)	-	Total emissions to the atmosphere from plants handling at least 1 ton annually
	Chlorofluorocarbons (tons)	-	Total emissions to the atmosphere from plants handling at least 1 ton annually
	Dioxins and dioxin-like compounds (mg-TEQ)	-	Total emissions to the atmosphere from incineration in own furnaces
	VOC emissions (tons)	Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (PRTR Law)	Annual use by individual production plant of chemical substances subject to the PRTR Law reporting is the amount exceeding the exemption cutoff. For other VOCs, the figure shown is the total of VOCs amounting to 1 ton or more of emission to the atmosphere.
Emissions to waters	Water discharged (million m ³)	-	Annual emissions to public waters and sewer systems
	COD emissions (tons)	Water Pollution Control Act	Calculated from annual discharged water and average concentration to which the Water Pollution Control Act applies. COD concentration (mg/l) × annual designated water discharge (m ³) × 10 ⁻⁶
	Nitrogen emissions (tons)		Calculated from annual discharged water and average concentration to which the Water Pollution Control Act applies. Nitrogen (mg/l) × annual designated water discharge (m ³) × 10 ⁻⁶
	Phosphorous emissions (tons)		Calculated from annual discharged water and average concentration to which the Water Pollution Control Act applies. Phosphorus concentration (mg/l) × annual designated water discharge (m ³) × 10 ⁻⁶
Waste emissions	Undesired materials generated (kt)	Waste Management and Public Cleansing Act	Total of valuable substances sold, outsourced processing and amount sent to own processing facilities
	Waste emissions (kt)		Total outsourced waste processing
	Waste per unit of production (tons/billion yen)		Calculated from waste emissions and DNP consolidated sales Domestic figures calculated based on domestic sales
	Final disposal volume (kt)		Of outsourced waste processing, the total disposed of in landfills after direct or indirect processing
	Final disposal rate (%)		Final disposal volume ÷ undesired materials production volume
	Recycle rate (%)		For paper, plastic, metal, and glass, calculated as: (amount of valuable materials + amount of materials recycled as resources + volume of thermal recycling) / undesired materials production volume
	Zero emissions		Calculated as final disposal volume / undesired materials production volume, and defined as less than 0.5%
	Used paper segregation/collection (tons)		Office paper collected
Scope 3	GHG emissions (million tons-CO ₂ equivalent)	<i>Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain, Version 2.2</i> (released by the Ministry of the Environment and the Ministry of Economy, Trade and Industry)	Activity data × Emission factor

Products and services	Environmental performance indicator	Standards for calculation, etc.	Calculation method, etc.
Environmentally conscious products and services	Sales of environmentally conscious products and services	–	Total sales of Eco-Products and Super Eco-Products, as determined by a point scale rating of degree of environmental consciousness from a product lifecycle standpoint
Environmental accounting	Environmental performance indicator	Standards for calculation, etc.	Calculation method, etc.
“Investment” in environmental conservation costs	–	<i>Environmental Accounting Guidelines, 2005 Edition</i>	Amount invested in environment-related facilities during the fiscal year
“Expense” in environmental conservation costs	–	<i>Environmental Accounting Guidelines, 2005 Edition</i>	Sum of depreciation, repair, operating and other costs of environmental facilities, environmental survey cost and personnel cost for the fiscal year Cost of personnel conducting administration activities is calculated by applying 100% of the average personnel cost for those engaging in the activities full-time. For those also assuming other roles, 10 or 20% of the average personnel cost will be applied, depending on their assignments.
Performance indicators corresponding to business area costs	Consumption/emissions per unit of domestic sales	<i>Environmental Accounting Guidelines, 2005 Edition</i>	Consumption per unit of consolidated sales in Japan used as a performance indicator for resources input into business activities (energy and water), and emissions per unit of consolidated sales in Japan as a performance indicator for waste and CO ₂ emissions
Environmental conservation benefit related to goods and services produced by business activities	CO ₂ emissions after product shipment (kt-CO ₂ equivalent)	<i>Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain, Version 2.2</i> (released by the Ministry of the Environment and the Ministry of Economy, Trade and Industry)	Sum of Scope 3 emissions (part of Category 4 and Categories 9, 10, 11 and 12)
Cost saving through environmental conservation activities	Disposal cost saving	–	Calculated by using a formula: (Per-unit volume for the base period – per-unit volume for the current period) x volume of business activities for the current period Volume of business activities is represented by consolidated sales in Japan, while per-unit volume is calculated by using a formula: waste disposal cost/consolidated sales in Japan. Per-unit volume for the base period (previous fiscal year) is the aggregated average of the past three years from the previous fiscal year.