

Input / Output 2023

Input				Output			
Energy Usage		8.62	million GJ* ¹	Greenhouse Gas Emissions* ⁴		368.5	thousand t-CO ₂
Break down	Electric power	765.3	thousand MWh	Break down	Energy related* ⁵	322.7	thousand t-CO ₂
	Solar power (included in Electric power)* ²	3.42	thousand MWh		Non-energy related* ⁶	45.9	thousand t-CO ₂
	Coal	11.3	thousand t	Released into the Atmosphere			
	Fuel oil	13.8	thousand kL	Break down	NOx	37.6	t
	Gas (excluding LPG and LNG)	13.8	million Nm ³		SOx	29.5	t
Water Usage		6,240	thousand m ³		VOCs* ⁷	62.0	t
Break down	Groundwater	4,818	thousand m ³		Dust and soot	12.9	t
	Tap water	841	thousand m ³	Released into Water Systems			
	Industrial water	580	thousand m ³	Break down	Wastewater	5,511	thousand m ³
Total Raw Materials Used		251.7	thousand t			COD* ⁸	116.8
Break down	Brake friction materials	58.1	thousand t		SSs* ⁹	84.8	t
	Chemical substances	42.9	thousand t	PRTR Substances			
	Steel	107.5	thousand t	Break down	Released amounts	23.6	t
	Raw cotton, cotton yarn	19.3	thousand t		Transferred amounts	62.6	t
	Packaging materials	7.2	thousand t	Total Waste Volume			
Volume of PRTR Substances* ³		2,390	t		Recycled Waste	46.1	thousand t
Office Paper Usage		58,270	thousand sheets		Products Shipments	291.8	thousand t
					Solar Power Sales	3.7	thousand MWh
					Transport Volume* ¹⁰	937.9	million t-km

TMD FRICTION GROUP S.A. ("TMD") and 21 other companies were excluded from the scope of consolidation due to the transfer of all shares of TMD, a subsidiary in the Automobile Brakes business, on November 30, 2023.

Therefore, TMD and 21 other companies are included in the data until November 2023.

On December 27, 2023, HVJ Holdings, Inc. and Hitachi Kokusai Electric Inc. that is a subsidiary of HVJ Holdings, Inc. and seven other companies were included in the scope of consolidation, but are not included in the data for FY2023.

*1 Gijajoule (GJ): A unit of energy measurement. 1GJ = 10⁹ J = about 240,000 kilocalories

*2 Not including electricity sold under the feed-in tariffs scheme for renewable energy

*3 PRTR substances: Substances subject to the Pollutant Release and Transfer Register (PRTR) system pursuant to the "Act on the Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof" and reports of their amounts of release and transfer must be filed.

*4 Greenhouse gases

•Scope1:

Energy-related Greenhouse Gas Emissions = Σ [Fuel Consumption x CO₂ Emission Factor*⁴⁻¹]

Non-Energy-related Greenhouse Gas Emissions = Non-Energy-related CO₂ Emissions + Σ [Greenhouse Gas Emissions other than CO₂ x Global warming potential*⁴⁻²]

*4-1 Emission factors based on the Act on Promotion of Global Warming Countermeasures are used. Coal, however, uses a factor calculated based on actual calorific values, which is 1.870 t-CO₂/t in FY2023.

*4-2 Global warming potential based on the Act on Promotion of Global Warming Countermeasures.

•Scope2:

Energy-related GHG emissions = Σ [purchased electricity and purchased steam volume x CO₂ emission factor*⁴⁻³]

*4-3 Purchased electricity uses, in Japan, adjusted emission factors for each electric company based on the Act on Promotion of Global Warming Countermeasures, and in foreign countries, the emission factors for each electric company, and if unavailable, the relevant year country-specific emission factors of IEA Emissions Factors. Data for FY2021 and earlier use country-specific emission factors for each year from "IEA Emissions Factors 2021".

Purchased steam uses an emission factor calculated by the purchasing company (0.0583 t-CO₂/GJ in FY2023).

*5 Energy related greenhouse gas emissions: Greenhouse gas emissions due to fuel consumption.

*6 Non-energy related greenhouse gas emissions: Greenhouse gas emissions due to reasons other than fuel consumption, e.g. manufacturing process, waste products, etc.

*7 Volatile Organic Compounds (VOCs): Emissions of volatile organic compounds such as toluene.

*8 Chemical Oxygen Demand (CODs): Chemical Oxygen Demand, or Chemical Oxygen Consumption, is an indicator that shows water contamination levels.

*9 Suspended Solids (SSs): The amount of foreign substances floating in water.

*10 Transportation volume: Total of land, sea, and air transport volumes