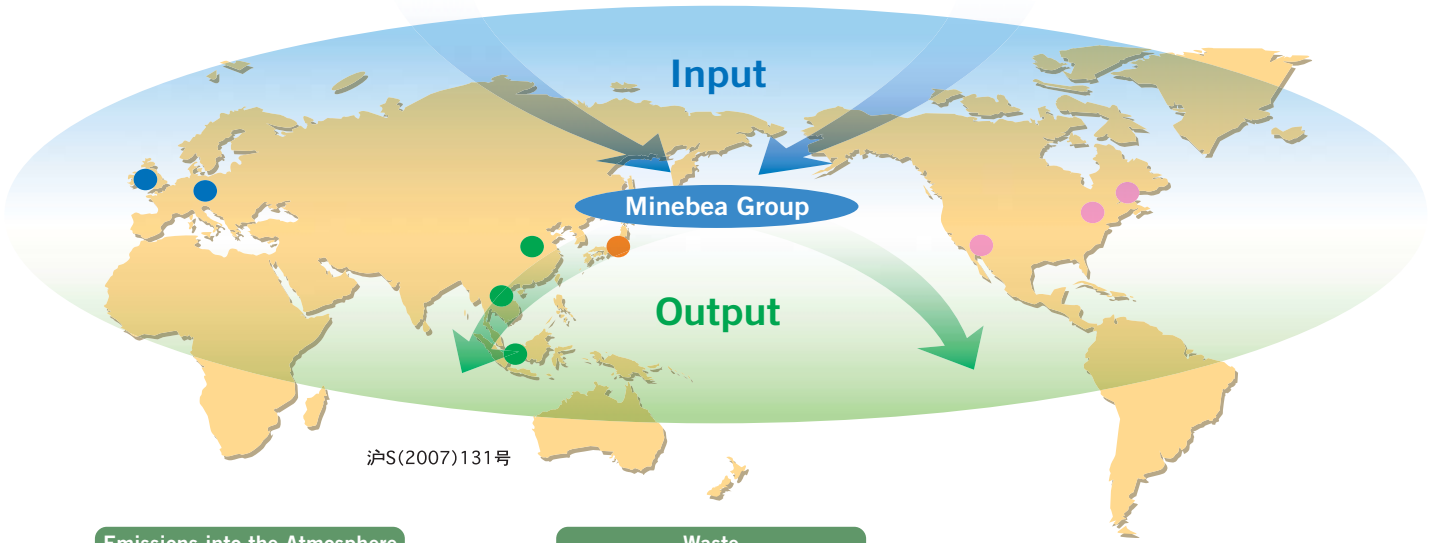
Minebea's global presence currently encompasses 28 plants in nine countries and 43 sales offices in 13 countries. The chart below depicts input and output from Minebea's plants in fiscal 2007.

Input–Output Flow and Material Balance[11]

Energy
- Electricity: 814,096 kwh
- LPG: 404 tons
- Natural gas: 3,361,000 m^3
- Oil: 3,644 kiloliters
- Water: 3,897,000 m^3

Raw Materials/Components
- Steel: approximately 72,000 tons
- Resin: approximately 15,000 tons
- Electronic components
- Packaging materials

Chemical Substances
- PRTR chemicals [7]: 8.6 tons (Japan)



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Emissions into the Atmosphere
- CO_2 [1]: 477,823 tons
- NO_X [2]
- SO_X [3]
- Particulates [10]

Waste
- Waste disposed of as waste outside the Company: 17,629 tons
- Waste recycled or reused: 9,207 tons
- Waste disposed of as landfill: 5,627 tons

Emissions into Water
- Wastewater: 3,500,000 m^3
- pH [4]
- COD [5]
- BOD [6]
- SS [8]
- n-Hexane extractions [9]

Products
- Bearings
- PC keyboards
- Electronic devices and others
- Motors
- Speakers
- Measuring components

Chemical Substances
- PRTR chemicals [7]: 7.7 tons (Japan)

Glossary

1. **CO_2: Carbon dioxide**
2. **NO_X: Nitrogen oxides**
3. **SO_X: Sulfur oxides**
   Emissions of CO_2, NO_X and SO_X result from the burning of coal, oil, gasoline and other fuels by, among others, thermal power generation, plant boilers and exhaust emissions from cars and trucks.
4. **pH:** A solution's pH reading indicates whether it is alkaline or acidic. The pH range is from 0 to 14, with 7.0 being neutral. Anything above 7.0 is alkaline, anything below 7.0 is acidic.
5. **COD: Chemical oxygen demand**
   The amount of oxygen required for oxidation of organic solids in water to CO_2. COD readings can be obtained more quickly than BOD readings, but they are less reliable. COD is commonly used to monitor pollution in effluent discharged into oceans and lakes.
6. **BOD: Biological oxygen demand**
   The amount of oxygen required for the biological oxidation of organic solids in water. The higher the BOD reading, the greater the level of pollution. BOD ratings usually take five days. BOD is commonly used to monitor pollution in effluent discharged into rivers.
7. **PRTR chemicals: Chemical substances included in the Pollutant Release and Transfer Register (PRTR)**
   In Japan, the Law Concerning the Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management requires companies to register and monitor the release and transfer of designated PRTR substances. Data for plants overseas is in the process of being collated.
8. **SS: Suspended solids**
   This term refers to matter suspended or dissolved in water or wastewater. The higher the percentage, the greater the water's turbidity.
9. **n-Hexane extractions**
   This term refers to the volume of oils and cleaning fluids extracted from water using the chemical n-Hexane. As used in this report, it denotes the volume of mineral oil extracted using n-Hexane.
10. **Particulates**
    Particulates are microscopic solid matter contained in exhaust gas generated as a result of combustion, heating or chemical reaction.
11. **Material balance**
    The net of "input" and "output."

Energy Consumption and Resulting CO_2 Emissions (Fiscal 2007)

Energy	Unit	Japan	Thailand	China	Singapore	United Kingdom	Germany	United States	**Total**
Electricity	1,000 kWh	45,156	552,672	96,740	63,640	15,762	2,837	37,289	**814,096**
Kerosene	Kiloliters	46	0	166	0	0	0	1	**213**
Heavy oil	Kiloliters	951	0	0	0	0	0	0	**951**
Fuel oil	Kiloliters	5	1,054	143	258	0	0	268	**1,728**
Gasoline	Kiloliters	14	350	320	53	0	12	3	**752**
LPG	Tons	128	35	187	13	0	0	41	**404**
Natural gas	1,000 m^3	840	1,609	0	0	191	98	623	**3,361**
Water	1,000 m^3	207	2,672	315	228	396	3	76	**3,897**
CO_2 emissions	Tons	21,960	304,414	84,224	34,314	7,764	1,520	23,627	**477,823**

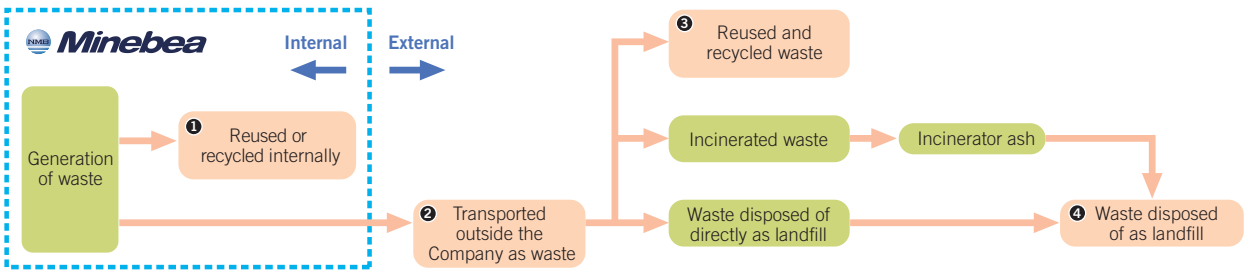
Note: In determining values for use in calculating CO_2 emissions at sites in Japan, Minebea referred to the Greenhouse Gas Emission Calculation Guideline for Businesses, published by Japan's Ministry of the Environment. In determining values for use in calculating CO_2 emissions overseas, Minebea referred to Greenhouse Gas (GHG) Protocol criteria.
Although consumption of electricity rose approximately 0.1% from fiscal 2006, ended March 31, 2006, a shift to other types of energy resulted in a decline in CO_2 emissions of approximately 7.0%.

Waste[1]

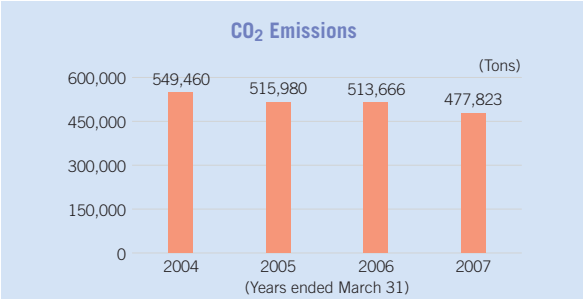
(Tons)

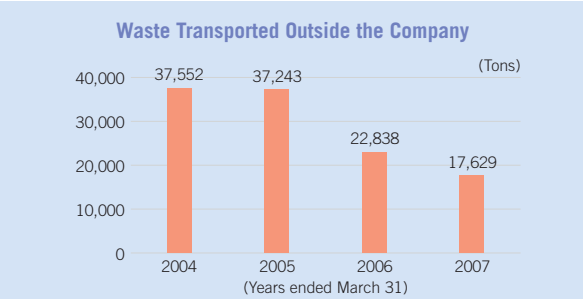
	Japan	Thailand	China	Singapore	United Kingdom	Germany	United States	**Total**
❶ Reused or recycled internally	117	233	3,491	313	6	0	22	**4,182**
❷ Transported outside the Company as waste	924	4,727	3,902	5,417	401	35	2,223	**17,629**
❸ Reused or recycled externally	307	1,114	2,155	3,848	163	17	1,603	**9,207**
❹ Disposed of as landfill	128	3,613	319	708	238	1	620	**5,627**

Note: In fiscal 2007, Minebea reviewed its standards for collecting data on waste. Figures for waste disposed of as landfill include estimates.



Minebea Group
CO_2 Emissions and Waste Transported Outside the Company





Glossary
1. Waste
As used in this report, waste refers to industrial waste, that is, unwanted materials from industrial operations, and includes materials to be recycled. (Materials with negotiable value are not included.)

Handling and Transfer of PRTR Chemicals (Japan; as reported to relevant authorities)

(Tons)

PRTR Number	Chemical	Volume Handled	Emissions			Transfer	Plant
			Released into the Atmosphere	Released into Water	Landfill	Waste	
144	Dichloropentafluoropane (HCFC-225)	7.3	6.9	0	0	0.4	Karuizawa Plant
232	Nickel compounds	1.3	0	0	0	0.4	Fujisawa Plant

Minimizing Water and Air Pollution

Concentrations in Water

Japan

Karuizawa Plant (Mg/liter)

	Legal Limit	Voluntary Limit	Maximum	Average
pH	5.8–8.6	6.0–8.0	7.7	7.6
COD	40	30	5.8	3.6
BOD	40	30	5.2	2.1
SS	60	55	21.0	11.0
n-Hexane extractions	5	5	<1.0	<1.0

Hamamatsu Plant (Mg/liter)

	Legal Limit	Voluntary Limit	Maximum	Average
pH	5.8–8.6	6.0–8.0	7.5	7.3
COD	40	20	5.4	4.4
BOD	25	20	2.4	0.8
SS	40	25	6.0	2.0
n-Hexane extractions	5	5	<1.0	<1.0

Fujisawa Plant (Mg/liter)

	Legal Limit	Voluntary Limit	Maximum	Average
pH	5.8–8.6	6.6–7.8	7.5	7.1
COD	60	30	10.0	6.2
BOD	60	30	12.0	3.8
SS	90	10	4.0	2.2
n-Hexane extractions	5	2	2.0	1.0

China

Shanghai Plant (Mg/liter)

	Legal Limit	Voluntary Limit	Maximum	Average
pH	6–9	7–8	8.0	7.7
COD	60	20	19.9	14.6
BOD	15	5	3.5	1.0
SS	70	10	9.0	4.6
n-Hexane extractions	3	1	1.0	0.7

Xicen Plant (Mg/liter)

	Legal Limit	Voluntary Limit	Maximum	Average
pH	6–9	7–8	7.9	7.5
COD	60	20	19.8	11.6
BOD	15	5	2.9	0.9
SS	70	10	9.0	5.8
n-Hexane extractions	3	1	0.9	0.7

Thailand

Bang Pa-in Plant (Mg/liter)

	Legal Limit	Voluntary Limit	Maximum	Average
pH	5.5–9.0	6.5–8.5	8.0	7.6
COD	120	80	46.5	33.5
BOD	20	18	3.8	3.0
SS	50	20	3.5	2.1
n-Hexane extractions	5	5	2.7	2.0

Lop Buri Plant (Mg/liter)

	Legal Limit	Voluntary Limit	Maximum	Average
pH	5.5–9.0	6.5–8.5	7.8	7.7
COD	120	80	62.0	52.0
BOD	20	18	4.0	3.1
SS	50	20	10.0	5.9
n-Hexane extractions	5	5	1.6	1.1

Rojana Plant (Mg/liter)

	Limit for Industrial Estate	Voluntary Limit	Maximum	Average
pH	5.5–9.0	6.0–8.8	6.8	6.6
COD	1,250	1,000	508.0	401.2
BOD	1,000	500	78.0	70.9
SS	200	150	22.0	13.1
n-Hexane extractions	10	10	4.1	2.9

Ayutthaya Plant (Mg/liter)

	Legal Limit	Voluntary Limit	Maximum	Average
pH	5.5–9.0	6.5–8.5	8.1	7.4
COD	120	80	39.8	21.7
BOD	20	18	3.0	3.0
SS	50	20	1.6	0.6
n-Hexane extractions	5	5	1.0	0.8

Concentrations in Air

Fujisawa Plant (Sectional hot water boiler)

	Unit	National Limit	Voluntary Limit	Maximum	Average
Particulates	g/m³N	0.3	0.25	0.01	<0.01
NO_x	ppm	180	150	47	45
SO_x	m³N/h	1.2	1	0.016	0.015

Hamamatsu Plant (Absorption chiller heater)

	Unit	National Limit	Voluntary Limit	Maximum	Average
Particulates	g/m³N	0.3	0.25	0.01	<0.01
NO_x	ppm	180	150	76	69
SO_x	m³N/h	1.2	1	0.018	0.014