

Environmental Accounting

In order to bring about the greatest possible environmental performance at the lowest possible cost, Komatsu manages its environmental activities based on a standard set of indices. The company will be developing this concept to Group domestic and overseas manufacturing facilities as well.

Concept of Environmental Accounting

Komatsu began releasing environmental accounting data in FY1999 in order to manage ongoing and effective environmental conservation activities and disclose to its customers, shareholders, and all other stakeholders the content, cost, and effects of those activities. In FY2000, the company expanded this environmental accounting to its overseas manufacturing facilities.

The costs of environmental conservation are calculated in accordance with guidelines and manuals published by the Ministry of the Environment.

Environmental accounting is still in the developmental stages. In the future, Komatsu intends to monitor efficiently the costs and effects of environmental conservation in light of the life cycles of its products and build a new environmental accounting system that can be an effective tool for evaluating environmental management.

Costs and Environmental Effects of Environmental Conservation

Komatsu's domestic investment increased by 37% year-on-year to 2,021 million yen as a result of increases in environmental conservation-related investment in keeping with the expansion in production capacity that occurred against the backdrop of expansion of the global market for construction and mining equipment, among other factors. In particular there was an increase in investment in measures to control environmental impact in manufacturing facilities, namely improvements in pollution mitigation and prevention equipment, including enhanced functioning capacities of wastewater processing facilities, and energy conservation-related measures.

Domestic research and development costs stayed at the same level as the previous fiscal year, at 13,449 million yen. This was a result of reducing the environmental impact of products, especially in the development of new products that meet the Tier III emissions regulations for diesel engines. As a result, the environmental conservation costs arising from R&D activities accounted for over 70% of the company's total expenditures, as in the previous year. With regard to

expenditures at its manufacturing facilities, Komatsu was able to reduce the cost of maintaining equipment through improvements in control efficiency and so on, offsetting fees for ESCO services and other energy conservation-related costs as well as fees resulting from greater amounts of waste for disposal resulting from increases in production volume (waste processing fees), ultimately resulting in holding expenditures to the same level as the previous fiscal year. These costs reflect expenses involved in surveys related to soil and groundwater contamination conducted at land tracts owned by the company as well as remedial countermeasures.

Concerning the effects of environmental conservation, numerical data about the following items have been disclosed.

- Environmental performance improvements that can be measured quantitatively
- Net economic effects that contribute to earnings through cost reduction and avoidance and that can be directly measured in monetary terms: in FY2005, Komatsu was able to achieve considerable positive economic effects as a result of energy conservation improvements.

The effects of reducing the environmental impact of Komatsu's products during use and the non-economic effects of external activities are still being estimated.

Management Based on Environmental Impact Point*1 (EIP)

With the aim of obtaining maximum ecological benefit (environmental performance) with minimum economic cost (financial performance), Komatsu integrated a standard set of indices for assessment of all environmental impacts attributable to manufacturing facilities. This has made it possible not only to express quantitatively (numerically) such qualitative terms as "environment-friendly plant" but also to show clearly the progress of targets and efforts.

In addition, as a rational environmental impact assessment index (JEPIX)*2 well adapted to the actual conditions of environmental activities in Japan was developed, Komatsu decided to adopt this analytical technique in FY2002. In addition, in order to enable visualization and facilitate understanding of which process is generating what envi-

Environmental Costs (Investments and expenses)

Top figure: Komatsu and Komatsu Group's domestic manufacturing facilities
Bottom figure: Komatsu Group's overseas manufacturing facilities (FY2004 excludes L&T-Komatsu Limited)

Category	Investment			Expenses		
	FY2004		FY2005	FY2004		FY2005
	Investment*1 (millions of yen)	Investment*1 (millions of yen)	Contents	Expenses*1 (millions of yen)	Expenses*1 (millions of yen)	Contents
(1) Business area cost	1,342	1,849		3,593	3,819	
	346	596		828	2,362	
1. Pollution prevention cost	712	995	•Installation and renovation of pollution mitigation/prevention facilities (conversion of effluent processing facilities, dust collecting equipment, etc.)	1,358	1,360	•Cost of maintaining equipment for mitigation/prevention of air and water pollution and for noise and vibration prevention (labor and depreciation costs)
	275	421		425	774	
2. Global environmental conservation cost	495	575	•Investment for implementing energy conservation measures, which include cogeneration systems and installing new ventilation systems	778	969	•Cost of maintaining energy conservation facilities, such as cogeneration systems (labor and depreciation costs)
	48	150		17	468	
3. Resource circulation cost	135	279	•Investment for reducing the volume of waste materials (establishment of resource recovery centers, installation of equipment for sludge dehydration, etc.)	1,456	1,491	•Waste materials processing cost
	23	25		386	1,120	
(2) Upstream/downstream cost	0	4		241	261	•Reduction of the environmental impact of components, etc. when shipping overseas
	12	0		60	740	•Reduction of the environmental impact of mass-production
(3) Administration cost	16	20	•Investment in beautifying manufacturing sites	623	623	•Cost of maintaining environment management systems
	6	0		187	423	•Cost of creating green spaces and beautifying manufacturing sites
(4) R&D cost*2	112	142	•Investment in research facilities for reduction of environmental impact	12,949	13,449	•Cost of R&D activities to reduce the environmental impact of products
	0	15		—*2	602	•Cost of R&D activities to develop environment-friendly equipment
(5) Social activity cost	0	0		3	7	
	0	0		2	7	
(6) Environmental remediation cost	0	6		229	149	•Cost of conducting surveys and remedial countermeasures related to soil and groundwater contamination
	0	0		1	7	
Total	1,471	2,021		17,638	18,309	
	364	611		1,077	4,142	

*1 All figures are rounded off to the nearest million yen.

*2 Environmental conservation cost involved in R&D cost includes only Komatsu UK Ltd.

ronmental impact, the analytical method known as the "material flow network" was adopted in FY2003.

Since FY2004, the level of management has risen, as seen in the increase in the wastes undergoing thermal recycling and in the number of chemical substances being assessed. As Komatsu is aiming for plants with truly zero emissions, it will be considering improvements from an even greater number of perspectives in the future.

*1 An integrated index of various environmental impacts

*2 The Environmental Policy Priorities Index for Japan, being developed at International Christian University as part of the 21st Century COE Program of the Ministry of Education, Culture, Sports, Science and Technology

Evaluation of Indices

Komatsu made an attempt to integrate the environmental impact of operations at each of its manufacturing facilities, associate the values obtained with environmental accounting, and use the two indices shown in the diagram below to evaluate the degree to which indices are being met for each of its manufacturing facilities.

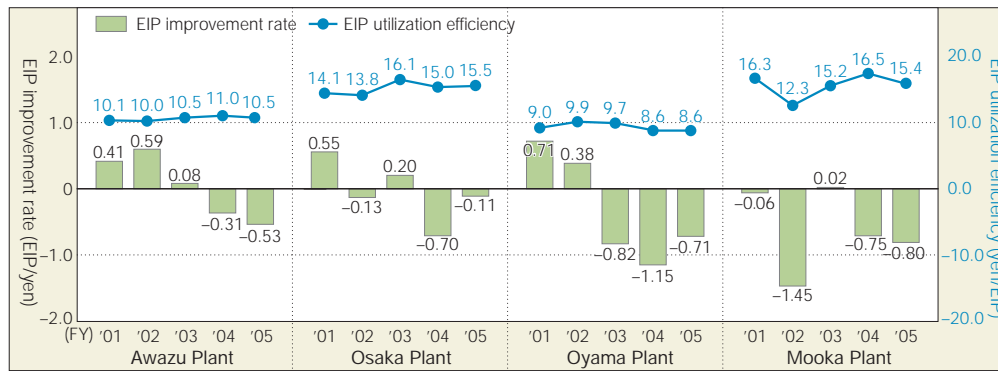
As a result, it was found that the Osaka Plant was most effective in reducing its environmental impact in FY2005. However, such gains

were unable to absorb the rising environmental impact resulting from increases in the volume of goods manufactured, and in fact every manufacturing facility saw a rise in environmental impact for two years in a row. In the future, a key issue will be how to lower total environmental impact even when there is a rise in production volume.

At the same time, the Osaka Plant obtained the equivalent value added (manufacturing amount) with the least integrated environmental impact. This is a result of vigorous energy conservation efforts since FY2004. From these facts, it follows that the Osaka Plant is the "most environment-friendly plant" when expressed in quantitative terms.

Komatsu considers it important to continue evaluating the degree of conformance to environmental standards set based on time-serial data obtained by using the two indices of overall environmental impact improvement efficiency and overall environmental impact utilization efficiency. In addition, Komatsu has plans to introduce this concept to the Komatsu Group's domestic and overseas manufacturing facilities in order to practice ecological business administration on a consolidated basis.

Comparison and Trend of EIP Improvement Rates/EIP Utilization Efficiency



EIP improvement rate:

- Effect of environmental impact reduction in relation to cost (EIP/yen) for environmental conservation activities, enabling Komatsu to measure the extent of environmental impact reduction for each monetary unit of 1 yen for environmental conservation activities.
- This enables the company to assess the effectiveness of environmental conservation activities.

EIP utilization efficiency:

- Manufactured value in relation to the degree of environmental impact (yen/EIP), enabling Komatsu to measure the amount of monetary value added (manufactured value) in relation to the degree of environmental impact.
- This enables the company to assess the environmental impact utilization efficiency rate directly related to business activities.

Cost of environmental conservation activities:
costs + investment amounts - depreciation amount
EIP: Environmental Impact Point

*A FY2003 change in the software used to calculate improvement rates and utilization efficiency rates resulted in slight changes in data compared with the data released in FY2002

Environmental Effects

Top figure: Komatsu and Komatsu Group's domestic manufacturing facilities
Bottom figure: Komatsu Group's overseas manufacturing facilities (FY2004 excludes L&T-Komatsu Limited)

Environmental impact reduction effects			Economic benefits				
Items of environmental impact	Reduction volume (t/year)	Rate of year-on-year changes (%)	Tangible benefits		Avoidance benefits of environmental risks* ²	Contribution to profits* ²	
			Type	Monetary value* ¹ (millions of yen)	Major activities		
CO ₂ emissions	-35,734	8.1	Energy conservation	1,085	•Introduction of cogeneration system	•There were no accidents or pollution in Japan during FY2005 that led to violations of the law. •No litigation costs were required in Japan during FY2005.	•Proceeds from mobile recycling equipment •Proceeds from value added due to reduced environmental impact of products (engines) •Proceeds from Reman business
	-8,785	4.1	Resource conservation	440			
Water consumption	-9,126	0.1	Waste materials reduction	19	•Promotion of recycling through thoroughgoing sorting		
	69,168	-3.2	Gain on sale of valuables	395			
Waste materials generation	-1,631	2.8	Other	6			
	725	-0.8	Total	1,944			
				2,443			

*1 Figures are rounded off to the nearest million yen.

*2 Komatsu used statements instead of numeral figures to describe the "Avoidance benefits of environmental risks" and the "Contribution to profits." The company will further develop concepts and ways to understand effects in these categories. The sales amounts of businesses for content presented in "Contributions to profits" in FY2005 are as follows:

- Mobile recycling equipment business: 10.4 billion yen (Mobile recycling equipment and recycling plant sales)
- Engine business: 66.0 billion yen (While engine sales are derived from Komatsu's overall construction equipment business, the engine sales here are those of the Engines and Hydraulics Business Division, including both intra-company and other intra-Group sales and sales to companies that do not belong to Komatsu Group.)
- Reman business: 20.0 billion yen (Worldwide Reman business sales from April 2005 to March 2006)

Effects on Society during the Product Use Stage*

Environmental impact reduction effects	Tangible benefits
<ul style="list-style-type: none"> • Environmental impact reduction resulting from on-site recycling methods • Environmental impact reduction resulting from product operation • Waste components reduction resulting from Reman business 	<ul style="list-style-type: none"> • Reduction of expenses for processing waste materials • Savings in operating and maintenance costs • Reduction of repair costs

*Concerning the effects on society derived from product use by customers, the major items of qualitative information are shown here as a reference.