Environmental Accounting

Enhancing environmental management efficiency by evaluating environmental activities from the cost and effect perspectives.

We have been employing an environmental accounting system since fiscal 1998 to provide quantitative assessments of the costs and effects of environmental protection measures. We developed environmental accounting guidelines for the Fujitsu Group in accordance with guidelines published by Japan's Ministry of the Environment, at the same time adding new items to the system with the aim of achieving more efficient environmental accounting. We are also developing a system to deploy IT to gather information with no delay from sites (plants, offices, etc.) throughout the world. The system's introduction has had several results: our employees' environmental consciousness has been raised; our focus on cost reduction efforts has been sharpened; and the positive effects of environmental measures have been magnified by greater internal cooperation among our plants and companies.

Environmental Accounting Measures

Purposes of introducing environmental accounting

- To disclose information to clarify the company's position to its stakeholders
- To implement ongoing environmental preservation activities
- To raise the effectiveness of environmental investments
- To activate environmental preservation activities

Fiscal 2001 Environmental Accounting Results

(Unit: 100 million yen)

	Item		Scope	Fujitsu	Affiliated companies	Total	See pages
Costs	Costs in business operations	Pollution prevention costs	Costs of preventing air/water pollution and soil contamination and other activities	27	32	59	31, 32, 47, 48, 49
		Environmental protection costs	Costs incurred through energy-saving measures, plus costs of measures to combat global warming	10	14	24	27, 28, 33, 46
		Resource recycling costs	Costs of waste reduction and disposal, plus costs of efficient resource usage measures, such as water conservation and rainwater use	14	27	41	29, 30, 46
		Wastewater treatment fees	Fees for water treatment utilities	5	3	8	—
	Upstream/downstream costs		Costs of lowering upstream/downstream environmental burden of manufacturing and service activities (recycling/re-use costs for waste products and packaging, costs of Green Procurement, etc.)	2	6	8	24〜26, 41, 45
	Management costs		Management-related environmental protection costs (personnel expenses for environmental promotion activities,costs of gaining/maintaining ISO14001 certification, costs of measuring environmental burden, etc.)	10	14	24	11, 12, 15, 16, 43, 49
	R&D/solutions business costs		Environmental protection costs for R&D activities and costs associated with environmental solutions business (design/development costs for Green Products and environmental technologies, environmental solutions business costs)	4	12	16	19〜23, 35〜38 44, 45
	Social activities costs		Environmental protection costs of social activities (costs of greenification programs, environmental report production and environmental publicity)	2	1	3	17, 18, 39
	Environmental clean-up costs (Risk avoidance)		Costs of environmental clean-up operations (costs of eliminating soil/groundwater contamination, environmental compensation, etc.)	3	1	4	33, 34
	Total			**77**	**110**	**187**	
Effects	Effects in business operations	Pollution prevention effects	Savings from avoiding losses from plant closure due to failure to observe environmental laws and regulations, plus contribution of environmental protection activities to the value added by manufacturing activities	84	55	139	31, 32, 47, 48, 49
		Environmental protection effects	Cost savings from reductions in consumption of electricity, oil and gas	14	10	24	27, 28, 33, 46
		Resource recycling effects	Cost savings from reductions and effective use of waste	9	38	47	29, 30, 46
	Upstream/downstream effects		Sales value of recycled and re-used products	1	7	8	24, 25, 26
	Management effects		Efficiency improvements due to ISO14001 systems, effects of in-house employee training	2	3	5	11, 12, 15, 16, 43
	R&D/solutions business effects		Sales contribution of Green Products, other eco-friendly products and environmental solutions business	10	4	14	19〜23, 35〜38, 44, 45
	Social activities effects		Value of corporate image enhancement from environment-related publicity	1	1	2	17, 18, 39, 50
	Environmental pollution prevention effects (Risk avoidance)		Savings from avoiding compensation payments to residents for groundwater and soil contamination	2	2	4	33, 34
	Total			**123**	**120**	**243**	

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Basic Principles for Environmental Accounting

1. Accounting Period

April 1, 2001–March 31, 2002

2. Scope of Data Collation

Data from Fujitsu and all its domestic/overseas consolidated subsidiaries (Data for a total of 95 companies are collated, although the scope of collation does not yet encompass some sales, software and service-related consolidated subsidiaries.)

3. Calculation Standards for Environmental Protection Costs

(1) Collation method for depreciation costs: Calculated using the straight-line method for a useful life of five years

(2) Only the portion related to environmental preservation is counted, based on methods specified in *Toward the Establishment of Environmental Accounting Systems*, 2000 edition.

4. Calculation Standards for Effects of Environmental Protection Measures

(1) Scope of economic effects: any real, measurable effects generated by reductions in the environmental burden while any goods or services produced by operations are being used, plus any reductions in environmental burden at the time of product disposal (with estimated effects, including risk avoidance benefits, taken into account).

(2) Basis for accounting regarding timing of effects from investments: See item 5 (2) below for real, measurable effects. In the case of estimated effects, except those considered fully realized within the fiscal year, the effects of environmental protection investments (contributory values, value of operating loss avoidance, etc.) are considered to extend over 12 months.

The basis for calculating the value of effects is as follows:

- Value contributing to environmental preservation activities based on the added value gained from production activities

  Value of effect = added value x ongoing operating costs of all environmental protection facilities / total costs generated

- Value of avoidance of any operating losses caused by the failure of operations to observe environmental laws and regulations

  Value of effect = added value / days of operation x days lost

- Value of effects of environmental public relations activities

  Value of effect = costs of press advertising x number of insertions

5. Principal Changes in Basic Points during Fiscal 2001

(1) The scope of data collation on operating costs was made stricter from the perspective of environmental protection (mainly in connection with co-generation systems introduced to cope with power cuts).

(2) The data collation period for measurement of benefits from investments was made consistent with the depreciation period (5 years).

(3) Measurement of the value attached to product reuse was initiated.

(4) Collation of data on ecology-related research contracting costs borne by Fujitsu Laboratories was transferred to Fujitsu Laboratories.

Our Basic Principles for Environmental Accounting are presented in detail on our homepage. (See URL at bottom of page 13.)

Characteristics of Fujitsu Group Environmental Accounting for Fiscal 2001

Our environmental accounting involved the collation of data from 95 companies in fiscal 2001. Costs totaled ¥18.7 billion, while the total value of related economic effects was ¥24.3 billion — both of which figures are similar to the fiscal 2000 results.

(1) Environmental Costs

- Pollution prevention costs (32%) and resources recycling costs (22%) accounted for the bulk of the costs. Maintenance and operation expenses for environmental preservation equipment accounted for a major portion of the pollution prevention costs, and waste disposal fees for a major portion of the resources recycling costs.
- Global environment preservation costs decreased by 38% compared with the previous fiscal year due to the rationalization of environmental factor cost distribution. R&D costs increased by 60% because of our promotion of Green Products development.

(2) Economic Effects

- Economical effects account for 32% of the actual effects and 68% of the assumed effects. A breakdown of the actual effects (32%) includes the global environmental preservation effect (30%), resources recycling effect (59%) and upstream/downstream effect (11%). The energy-saving effect accounted for a major portion of the global environmental preservation effect and the water-saving/chemical substances reduction effects for a major portion of the resources recycling effect.
- The global environmental preservation effect increased by 50% due to the expansion of energy-saving activities and introduction of equipment.

Transitions in costs/effects

(Unit: 100 million yen)

		1999	2000	2001
Fujitsu	costs	85	82	77
	effects	103	111	123
Affiliated companies	costs	82	109	110
	effects	119	135	120
Total	costs	167	191	187
	effects	222	246	243

Breakdown of effects

(Unit: 100 million yen)

	Actual effects	Estimated effects	Total
Fujitsu	23	100	123
Affiliated companies	55	65	120
Total	78	165	243

Fiscal 2001 Environmental Burden Reduction Improvement Indicators

(Fujitsu)

Item	Result
Environmental improvement (EI) indicator*1 [Ton-CO_2/100 million yen]	355
Environmental efficiency (EE) indicator*2 [100 million yen/Ton-CO_2]	0.051

Fiscal 2001 Environmental Burden Reduction Effect (reference)

(Fujitsu)

Effect [Ton-CO_2]
27,335*

* This value shows the fiscal 2001 environmental burden reduction effect achieved through energy savings (lower consumption of electricity, oil and gas), and waste reduction (reduced disposal of wastepaper, waste plastic, waste oil and wood chips).

*1, 2 Please refer to page 52 for definitions.