



12. Environmental Accounting

Environmental accounting is used to determine the total monetary cost of protecting the environment in Showa Shell's business activities.

The total cost is calculated based on the Ministry of the Environment's Environmental Accounting Guidebook 2002 and Environmental Protection Cost Classification Guidelines 2003. The main items are outlined below.

The independent costs of affiliated dealers (mainly service stations) are not included in the Group's environmental accounting.

● Business Area Cost

Includes environmental protection costs to limit environmental impact arising from business activities, such as atmospheric and water pollution control costs, global environmental protection costs such as measures against global warming and energy conservation costs, and resource circulation costs such as recycling, treatment, and disposal of waste materials.

● Upstream/Downstream Costs

Main costs are those associated with facilities operations and maintenance for producing environmentally friendly products, such as low-sulfur products and benzene reduction in gasoline.

● Management Activities Cost

Management activities environmental conservation costs include expenses for environmental improvement measures at and around operational sites. These include environmental management system equipment and operation, disclosure of environmental information and advertising, monitoring environmental impact, and employee education.

● R&D Cost

Includes costs incurred in environment-related technology and product research and development. These may include costs associated with producing fuel cells, photovoltaic energy generation, cogeneration, GTL fuels, soil decontamination, and lubricants and greases.

● Social Activities Cost

Includes costs associated with contributions to the Showa Shell Sekiyu Foundation for Promotion of Environmental Research and the International Oil Pollution Compensation Fund, as well as costs associated with social efforts, such as support for regional environmental activities and information disbursement.

● Environmental Damage Cost

Includes costs incurred in response to environmental damage, such as nature restoration (including treatment of contaminated soil) and oil pollution liability insurance.

■ Costs Associated with Environmental Protection

(million yen)

Item	January – December 2004	
	Capital Expenditures	Management cost
Business area cost		
• Pollution prevention cost		
• Global environment protection cost	145.2	8,136.5
• Resource circulation cost		
Upstream/downstream cost	7,323.3	33,321.3
Management activities cost		576.6
R&D cost	17.6	248.0
Social activities cost		123.2
Environmental damage cost		240.2
Total costs	7,486.1	42,645.8
	January – December 2003	
Total costs	8,394.7	37,103.5