

Environmental Economic Perspective

Environmental Accounting

Since 2002, ZEON has publicly released its environmental protection costs and environmental protection effects (physical effects and economic effects) in line with guidelines issued by the Ministry of the Environment.

Environmental Protection Costs

Capital investment for environmental protection

A major investment in pollution prevention during 2008 was the upgrade to the capacity of the aeration tanks at the Tokuyama Plant. Through introduction of aeration tubes, we have succeeded in and are continuing increasing dissolved nitrogen through improved aeration and thereby reducing total COD (chemical oxygen demand).

One example of an energy conservation measure was investment in optimizing the operation of the monomer production equipment at Mizushima Plant for energy reduction.

Also, ongoing improvements are made for stable

operation of the new incinerator at the Kawasaki Plant in our industrial waste performance.

Environmental protection costs

We are developing technologies to minimize waste water and to reduce the level of volatile substances that remain in products. We are focusing in particular on reducing butadiene and acrylonitrile, both toxic air pollutants, and on developing technology, designing equipment and trialing operating procedures to reduce the level of contaminants such as T-N (total nitrogen) and COD (chemical oxygen demand) in waste water.

Meanwhile, our affiliated group companies have been concentrating on administrative and improvement activities to recycle waste and reduce disposal to landfill.

2008 Environment Accounting Sheet

| Environment Protection Costs (Million Yen) | | ZEON Corporation | | Affiliated Group Companies | |
|---|---|-------------------|----------|----------------------------|----------|
| Classification | | Investment Amount | Expenses | Investment Amount | Expenses |
| 1. Costs within the business area | | 246.2 | 2,837.2 | 277.6 | 2,979.6 |
| Breakdown | (1) Pollution prevention costs | 141.5 | 2,056.8 | 165.7 | 2,108.7 |
| | (2) Global environment protection costs | 60.5 | 194.8 | 66.7 | 198.6 |
| | (3) Resource recycling costs | 44.2 | 585.6 | 45.2 | 672.3 |
| 2. Upstream and downstream costs | | 75.8 | 3.1 | 75.8 | 78.0 |
| 3. Management activity costs | | 0.0 | 73.9 | 6.5 | 82.9 |
| 4. Research and development costs | | 196.1 | 1,741.8 | 196.1 | 1,758.3 |
| 5. Social activity costs | | 0.0 | 71.5 | 0.3 | 72.1 |
| 6. Environmental damage handling costs | | 0.0 | 46.4 | 0.0 | 48.4 |
| Total | | 518.0 | 4,773.9 | 556.2 | 5,019.4 |

Scope of accounts
ZEON Corporation
ZEON Head Office, R&D Center, Takaoka Plant, Kawasaki Plant, Tokuyama Plant, Mizushima Plant
Affiliated Group Companies:
Okayama Butadiene Co., Ltd., ZEON Chemicals Yonezawa Co., Ltd., ZEON Logistical Materials Co., Ltd., RIMTEC Corp., ZEON Medical Inc., ZEON North Co., Ltd., ZEON Yamaguchi Co., Ltd., ZEON Polymix Co., Ltd. Otsu Plant and Kawagoe Plant, Optes Inc. Sano Headquarters Plant and Toyama Plant, ZEON Kasei Co., Ltd. Ibaraki Plant
Period Covered
April 1, 2007 to March 31, 2008

| Item | ZEON Corporation | Affiliated Group Companies |
|---|------------------|----------------------------|
| Total investment amount within applicable period | 27,803 | 28,439 |
| Total research and development costs within applicable period | 10,664 | 10,885 |

Environmental Protection Effects

Physical effects

In the area of atmospheric pollution, a decrease in SOx emissions has been achieved by switching the heavy oil used to fire the boiler at Tokuyama Plant to a low-sulfur fuel.

Waste water COD (chemical oxygen demand) has also been reduced significantly due to upgrades to the

capacity of the aeration tanks at Tokuyama Plant and the shutdown of PVC production at Takaoka Plant.

The total volume of waste ultimately disposed of in landfill has been reduced significantly by better sorting and by encouraging measures such as incineration of sludge.

| Environmental Protection Effects | ZEON Corporation | Comparison Index | Affiliated Group Companies | Comparison Index |
|---|----------------------------|---------------------------|----------------------------|---------------------------|
| Description of effects | Environmental burden index | Compared to previous year | Environmental burden index | Compared to previous year |
| SOx emissions (tons) | 564 | ▲137 | 7565 | ▲138 |
| NOx emissions (tons) | 408 | ▲8 | 409 | ▲8 |
| COD emissions (tons) | 140 | ▲54 | 140 | ▲54 |
| CO2 emissions (amount of carbon) (tons) | 177,136 | ▲27,164 | 186,192 | ▲25,390 |
| Industrial waste sent to landfill (tons) | 471 | ▲1,051 | 957 | ▲1,148 |
| Total emission of substances subject to the PRTR law (tons) | 40 | ▲18 | 47 | ▲19 |

Scope of accounts
ZEON Corporation
ZEON Head Office, R&D Center, Takaoka Plant, Kawasaki Plant, Tokuyama Plant, Mizushima Plant
Affiliated Group Companies:
Okayama Butadiene Co., Ltd., ZEON Chemicals Yonezawa Co., Ltd., ZEON Logistical Materials Co., Ltd., RIMTEC Corp., ZEON Medical Inc., ZEON North Co., Ltd., ZEON Yamaguchi Co., Ltd., ZEON Polymix Co., Ltd. Otsu Plant and Kawagoe Plant, Optes Inc. Sano Headquarters Plant and Toyama Plant, ZEON Kasei Co., Ltd. Ibaraki Plant
Period Covered
April 1, 2007 to March 31, 2008

Economic Effects

ZEON aims to put the waste resulting from oil by-product production and similar to beneficial economic use through measures such as recycling or burning. Effort is also being put into recycling metal

products such as empty drums and other containers. One energy saving measure is that ZEON pays special attention to thermal recovery in its energy-intensive distillation processes.

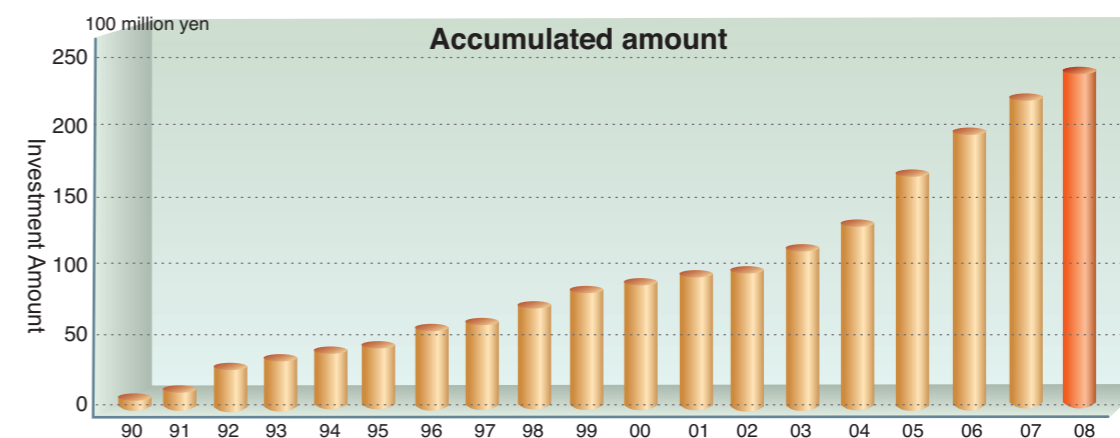
| Economic Effects Associated with Environmental Preservation Measures (million yen) | ZEON Corporation | Affiliated Group Companies |
|---|------------------|----------------------------|
| Description of effects | | |
| Benefits of reclaiming material and utilization as fuel | 1,098.4 | 1,163.9 |
| Cost reduction through energy savings | 93.6 | 85.0 |
| Reduction of industrial waste processing costs | 0.0 | 11.0 |
| Cost reduction through waste-elimination and recovery and reuse of solvents and catalysts | 543.0 | 546.1 |
| Total | 1,735.0 | 1,806.0 |

Scope of accounts
ZEON Corporation
ZEON Head Office, R&D Center, Takaoka Plant, Kawasaki Plant, Tokuyama Plant, Mizushima Plant
Affiliated Group Companies:
Okayama Butadiene Co., Ltd., ZEON Chemicals Yonezawa Co., Ltd., ZEON Logistical Materials Co., Ltd., RIMTEC Corp., ZEON Medical Inc., ZEON North Co., Ltd., ZEON Yamaguchi Co., Ltd., ZEON Polymix Co., Ltd. Otsu Plant and Kawagoe Plant, Optes Inc. Sano Headquarters Plant and Toyama Plant, ZEON Kasei Co., Ltd. Ibaraki Plant
Period Covered
April 1, 2007 to March 31, 2008

Environmental Economic Perspective

Not only are we making the environmental investments in pollution prevention equipment and resource and energy conservation equipment that appear in the environmental accounts, we are also working to improve safety through ongoing investment in improv-

ing safety and eliminating risks (safety investment). The graph below shows the cumulative trend in total environmental and safety investment (environmental investment + safety investment).



Environment and Safety Investment Amount

| 2008 Investment Amount (100 million yen) | ZEON Corporation | Affiliated Group Companies | Total |
|--|------------------|----------------------------|-------------|
| Environment-related | 3.2 | 0.3 | 3.5 |
| Safety-related | 15.3 | 0.8 | 16.1 |
| Total | 18.5 | 1.1 | 19.6 |

Scope of accounts
ZEON Corporation
ZEON Head Office, R&D Center, Takaoka Plant, Kawasaki Plant, Tokuyama Plant, Mizushima Plant
Affiliated Group Companies:
Okayama Butadiene Co., Ltd., ZEON Chemicals Yonezawa Co., Ltd., ZEON Logistical Materials Co., Ltd., RIMTEC Corp., ZEON Medical Inc., ZEON North Co., Ltd., ZEON Yamaguchi Co., Ltd., ZEON Polymix Co., Ltd. Otsu Plant and Kawagoe Plant, Optes Inc. Sano Headquarters Plant and Toyama Plant, ZEON Kasei Co., Ltd. Ibaraki Plant
Period Covered
April 1, 2007 to March 31, 2008