



# drawing tomorrow

LG Chem 2006 RC Report | Environmental Report





**LG Chem**  
cares about  
preserving nature's  
beauty.

**Nature is our foundation.**

The development of the chemical industry can only be realized by combining natural resources and scientific methods.

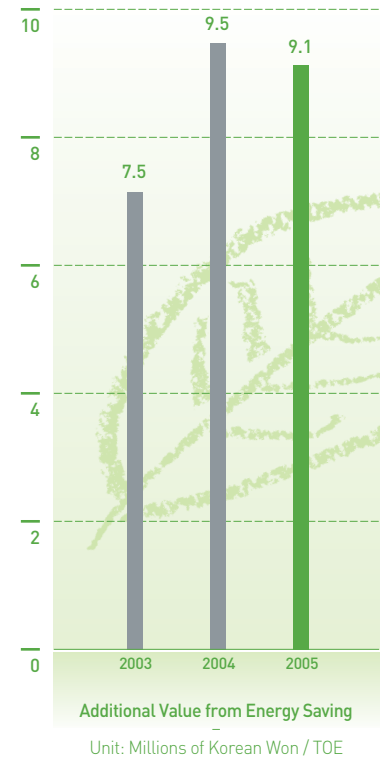
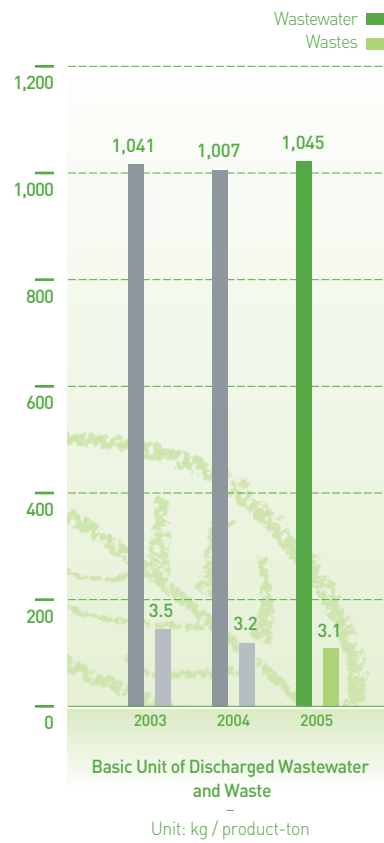
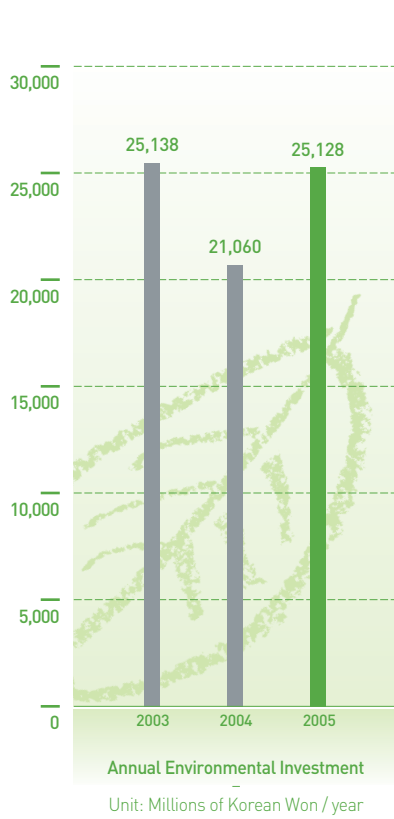
**Nature is our inspiration.**

We look to nature's systematic organization to reveal each chemical's optimum value.

**Nature is our future.**

LG Chem works harmoniously with all of nature's elements. Our future is guided by the will and needs of nature's precious children.

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\_Environmental Management



\_Environmental Impact & Performances



\_Partnership with Interested Parties

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# REPORT OUTLINE

## Period & Scope

- LG Chem has published its annual Responsible Care (RC) Report since 2003, focusing on the sustainable development of global environment through carrying out wholesome environment, safety, health, and energy management. The 2006 RC Report clarifies for customers, investors, non-government organizations (NGOs), and other stakeholders our business achievements relevant to environmental management for the period from January 1 to December 31, 2006. It includes a review of the operation of our eight domestic establishments: Yeosu, Cheongju, Ochang, Ulsan, Onsan, Naju, Iksan, Daesan Plants; and LG Chem Research Park in Daejeon. It excludes our overseas subsidiaries.

## Guidelines

- The 2006 RC Report is prepared prior to publishing a full-coverage sustainability report. In strict accordance with the guidelines of the Environmental Report 2004 of Korean Ministry of Environment and the 2002 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI), this report covers our business results centered on environmental management. It will be stepped up to the level of a sustainability report in coming years. Thus interested parties can see at a glance how our environmental, economic, and social activities are directed to facilitate future sustainability.

## Public Notice

- This report is printed in Korean, English, and Chinese, and posted at [www.lgchem.com](http://www.lgchem.com), also offering Korean, English, and Chinese versions.

## Contact Point

- For more inquiries about this report, feel free to call, mail, or e-mail us any time at the addresses. We welcome your input. Please fill in the questionnaire included in the Appendix and send it to us. Your opinions will be reflected in our next edition.

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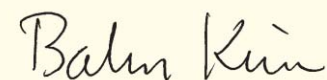
## Message from the CEO



LG Chem is committed to becoming a globally-recognized company, and we will reach that goal by fulfilling our economic, social and environmental responsibilities to society.



- The chemical industry provides many of the staples needed in our daily lives and in a wide range of industries. It is also a fact that the chemical industry consumes a great deal of energy and raw material, and that it poses considerable risks in terms of environmental damage and human safety. The world will continue to need chemicals, and so it is essential going forward that proactive, systematic safety management becomes the foundation on which we base both our corporate strength and sustainable growth.
- LG Chem envisages holding a global leading position through growing together with our customers, nurturing win-win partnerships that offer differentiated materials, solutions and enhanced value. Under this vision, we minimize environmental risks in our entire operation from production and distribution to disposal.
- Our environment, health, and safety (EHS) management is incorporated with our Responsible Care initiatives. Our company-wide practices based on rigorous EHS Management resulted in the acquisition of ISO 14001, Process Safety Management (PSM), OHSAS 18001, and KOSHA 18001 certificates. Today, we step up the standards of EHS Management in line with the continued reduction of greenhouse gas emission, energy use, and environmental and safety risks inside and outside the Company. Our goal is to achieve our ultimate environmental objective, “Pollutant Emission ‘Zero’”. As for social contribution, we carry out various activities in an effort to bring hope to those in need. To promote the importance of chemistry and cultivate youth talented in chemical science, we offer intriguing chemical programs including the Mobile Chemistry Lab and Chemistry Camp.
- At LG Chem, we have published the RC Report to inform customers, investors, the community, non-government organizations (NGOs), and other stakeholders about our business and environmental performance. We plan to upgrade this annual RC Report to a full coverage sustainability report, and to reflect your valuable input in our upcoming edition.
- LG Chem's goal is to become a globally-recognized company. We will reach that goal by fulfilling our economic, social and environmental responsibilities to society. We look forward to your continued interest and support.
- Thank you.



President & CEO, LG Chem  
September 2006 Bahnsuk Kim





A Globally-recognized Chemical Company, **LG Chem**

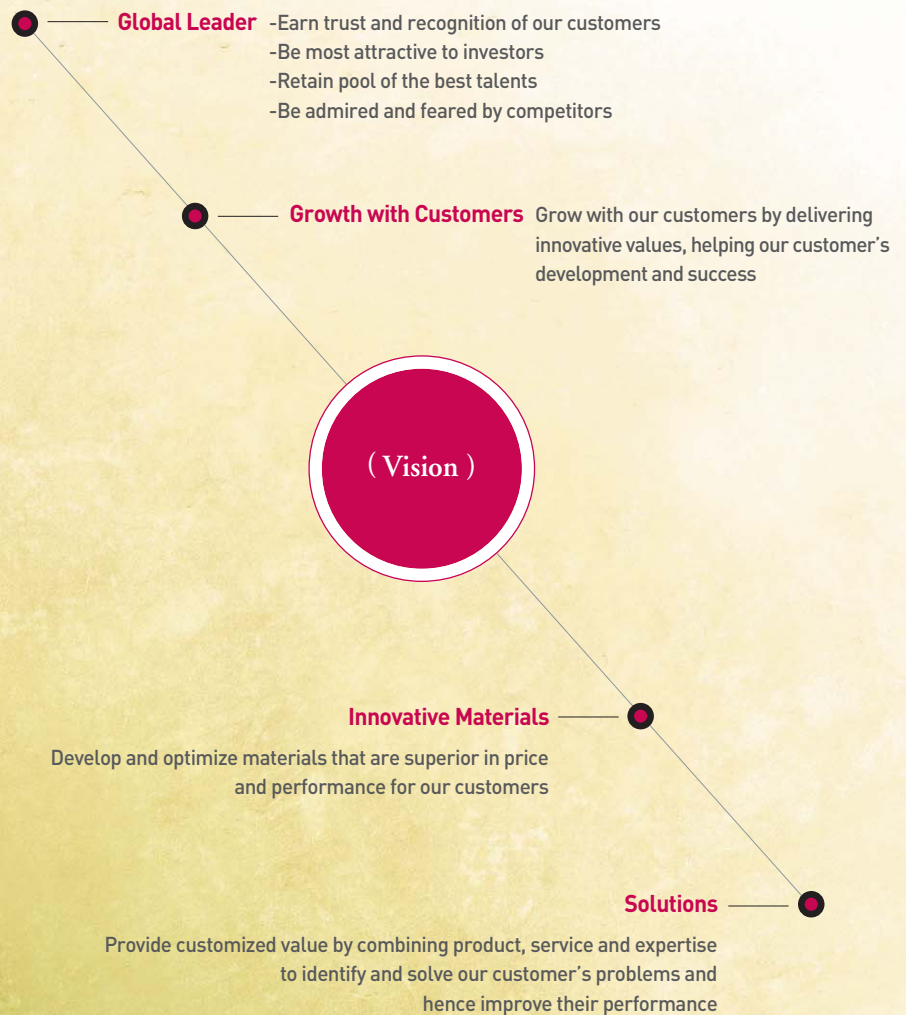
- Since our business inception in 1947, we at LG Chem have risen to the top of Korea's chemical industry through ongoing innovation in technology and management.
- To date, we operate Petrochemicals, Industrial Materials, and Information and Electronic Materials as our business cores.
- In an effort to become a world-recognized company, we tap the potential in upcoming business areas to the fullest extent, especially those involved with information and electronic materials.

# Vision & Core Values

## \_Vision

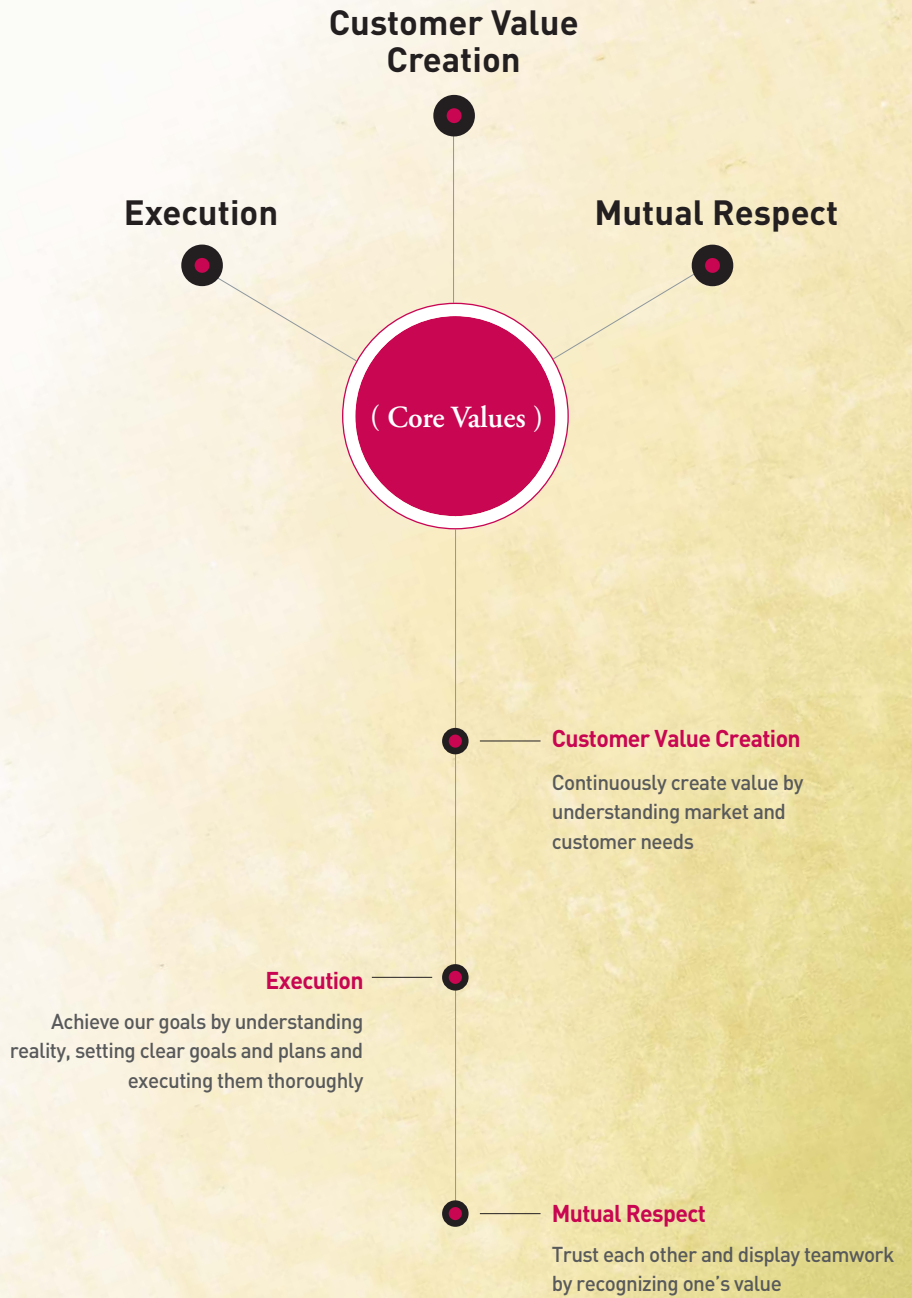
### To be a global leader-

Growing with customers by providing innovative materials and solutions

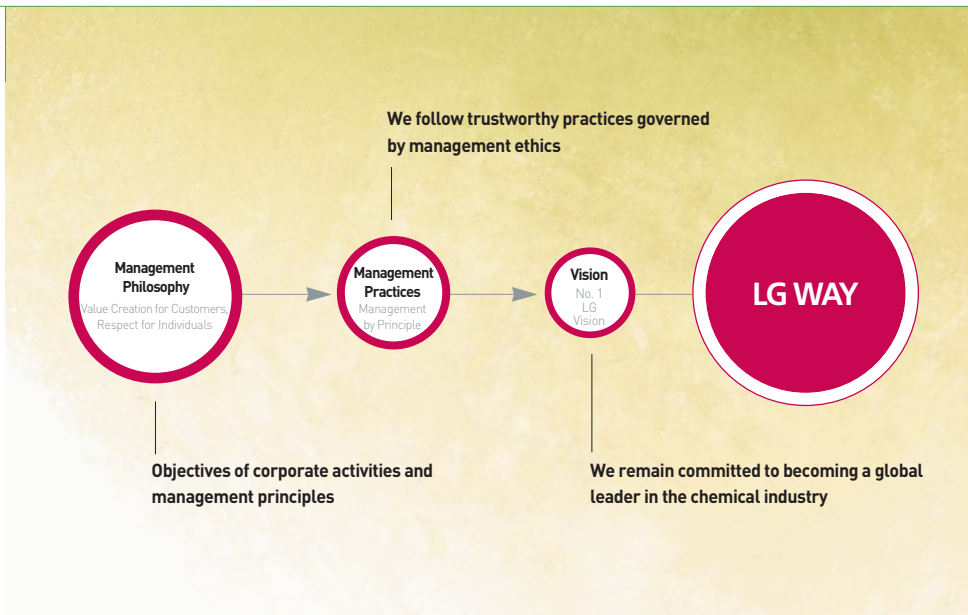




## \_Core Values



# Management by Principle



Ethical Management Awards
<b>The Ministry of Commerce, Industry and Energy</b> • Feb. 2005: Selected as an Excellent Ethical Management Enterprise in the Private Enterprise category. Selected as an Excellent Ethical Management Enterprise in the CEO, Worksite, Customer and Community categories. [Selected as an Excellent Ethical Management Enterprise in the Customer category in 2003]
<b>Seoul Economic Daily News Paper</b> • Feb. 2005: The Best Company Award in the Respectful Enterprise Category
<b>The Korea Academy of Business Ethics</b> • Mar. 2005: Grand Prize Award in the Corporate Ethics Category
<b>Dong-A Daily Newspaper</b> • Jun. 2005: Silver Medal Award in the Top 30 Most Respected Enterprises Category
<b>Economic Review</b> • Nov. 2005: Award for Outstanding Enterprises of the Year 2005
<b>The Citizens' Coalition for Economic Justice</b> • Dec. 2005: The Best Company Prize in Economic Justice Enterprise Awards

At LG Chem, respect for the individual and focus on our customers are the core elements of our Management by Principle. We first laid down the LG Code of Ethics in 1994, declaring our intention to behave as a responsible corporate citizen. We followed that up in 1995 with our Management by Principle program to disseminate the Code and implement it throughout our organization. More recently, in 2005 we unveiled the “No. 1 LG Vision”, which embodies comprehensively the ethical management systems and company culture that will ensure LG Chem remains the role model of corporate citizenship.

Transparency and fair business must be practiced continually, not just preached occasionally. To earn the respect and trust of our customers and communities, LG Chem opened the Unfair Business Practice Reporting Center in 1993, and joined the Fair Business Transaction Compliance Program in 1995. We have installed a company-wide “Cyber Whistle-blower System”, through which any employee may report a suspicious business activity, without fear of reprisal. One of our most creative initiatives is the “Gift Receipt Reporting System”, through which any employee who has accidentally accepted an improper gift can turn it over to LG Chem, which auctions the gifts and donates the proceeds to social welfare causes. In 1999, we made education in international bribery prevention part of our regular training program for new recruits, and in 2003 established LG Chem Ethics Office at our headquarters and all major subsidiaries. The role of LG Chem Ethics Office is to support our managers and employees in developing the habits and self-discipline to maintain global standards of business ethics. We also ensure that every employee receives periodic online training and offline workshops in business ethics. These programs are updated whenever necessary to keep pace with the changing demands of global business.

LG Chem works together with its partners to promote a transparent business culture. We have introduced an “OPEN” electronic bidding system for the transparent purchase of materials and services. We also send letters to all of our business partners on festive days, when Koreans traditionally exchange gifts, to inform them of our company policy prohibiting employees from accepting money or valuables from their business contacts.

We aren't the only ones who think we are doing a good job. In 2005, LG Chem was recognized as an Ethical Enterprise by the Korean Ministry of Commerce, Industry and Energy, the Korea Academy of Business Ethics, the Dong-A Daily News, and the Citizens' Coalition for Economic Justice. Even though it appears that we have achieved our goals, however, we know that this work is ongoing. Just as we will never cease our efforts to become a major player in the global chemicals industry, so we will never stop promoting transparent, ethical management in our company.



● Cyber Whistle-blower System



# Company Overview



If only LG Chem can inspire your child to dream...  
it's okay to be invisible.

LG Chem is all around even at the very moment your child dreams.

From specialty plastics and other chemical products to industrial materials and digital materials, we are close to your daily life.



If only LG Chem can enrich the moment of love...  
it's okay to be invisible.

LG Chem is all around you even at the very moment you fall in love.

From windows, wallpapers and other industrial materials to chemical products and digital materials, we are close to your daily life.



If only LG Chem can help you succeed... it's okay to be invisible.

LG Chem is right next to you when you are making your way toward success.

From TFT-LCD polarizer, batteries and other digital materials to chemical products and industrial materials, we are close to your daily life.

## ● Statement of Income

Unit: Millions of Korean Won

Classification	2003	2004	2005
Sales	5,672,466	7,127,411	7,425,104
Cost of Sales	4,519,928	5,784,125	6,107,725
Gross Profit	1,152,538	1,343,286	1,317,379
Selling and Administrative Expenses	678,880	820,368	895,665
Operating Profit	473,685	522,918	421,714
Non-operating Profit	208,138	468,517	372,607
Non-operating Expenses	198,976	271,723	326,643
Ordinary Income	482,820	719,712	467,678
Income before Income Taxes	482,820	719,712	467,678
Income Tax Expenses	120,711	183,292	67,420
Net Income	362,109	536,420	400,258

## ● Breakdown of Employees

As of December 31, 2005

Classification	Office	Production	Total
Number of Men	4,265	4,687	8,952
Number of Women	965	203	1,168
Total	5,230	4,890	10,120

## ● Sales in 2005

Unit: Millions of Korean Won

Business Division	Classification	Market	Sales		
			2003	2004	2005
Petrochemicals	Domestic		1,190,423	1,394,107	1,484,730
		Overseas	1,826,005	2,495,164	2,583,633
	Sub-Total		3,016,428	3,889,271	4,068,363
Industrial Materials	Domestic		1,587,162	1,558,552	1,610,523
		Overseas	369,995	473,531	470,803
	Sub-Total		1,957,157	2,032,083	2,081,326
Information & Electronic Materials	Domestic		43,571	64,414	63,440
		Overseas	655,310	1,141,643	1,211,976
	Sub-Total		698,881	1,206,057	1,275,416
Total	Domestic		2,821,156	3,017,073	3,158,693
		Overseas	2,851,310	4,110,338	4,266,412
	Sub-Total		5,672,466	7,127,411	7,425,104

# LG Chem Establishments \_ Overseas Affiliates



## Manufacturing Subsidiaries

Name	Location
LG Polymers India Pvt. Ltd.	Mumbai
	Vizag
LG Chemical (Guangzhou) Engineering Plastics Co., Ltd.	Guangzhou
LG Chem (Nanjing) Information & Electronic Materials Co., Ltd.	Nanjing
Tianjin LG Window & Door Co., Ltd.	Tianjin
Tianjin LG New Building Materials Co., Ltd.	Tianjin
Tianjin LG DAGU Chemical Co., Ltd.	Tianjin
Ningbo LG Yongxing Chemical Co., Ltd.	Ningbo
LG Vina Chem J/V Company	Ho Chi Minh
LG Chem Industrial Materials Inc.	Adairsville
Ningbo LG Yongxing Latex Co., Ltd.	Ningbo
Tianjin LG BOHAI Chemical Company Ltd.	Tianjin
LG Chem (Tianjin) Engineering Plastics Co., Ltd.	Tianjin
LG Chem Display Materials (Beijing) Co., Ltd.	Beijing
LG Chem Poland SP.Z.O.O	Wroclaw

## Marketing Subsidiaries

Name	Location
LG Chem China Investment Co., Ltd.	Beijing
	Shanghai
	Guangzhou
	Nanjing
	Yantai
	Shenzhen
	Shenyang
LG Chem (Taiwan), Ltd.	Taipei
LG Chem HK Ltd.	Hong Kong
LG Chem America, Inc.	New York
	Los Angeles
	Detroit
	San Jose
	San Diego
	Austin
	Houston
LG Solid Source, LLC	Phoenix
LG Chem Brasil, Ltd.	São Paulo
LG Chem Europe GmbH	Frankfurt
	Geneva

## Representative Offices

Name	Location
LG International Japan Ltd.	Tokyo
LG Chem Ltd. New Delhi Office	New Delhi
LG Chem, JKT Office	Jakarta
LG Chem Ltd. Bangkok Office	Bangkok
LG Chem, SP Office	Singapore
LG Chem, HCM Office	Ho Chi Minh
LG Chem Ltd. Moscow Office	Moscow
LG Chem Ltd. Istanbul Office	Istanbul



# \_ Domestic Plants



- Manufacturing Subsidiaries
- Marketing Subsidiaries
- Representative Offices
- Domestic Plants



## ● Research Park

Area\_ 85,530 m<sup>2</sup>  
 Major Business\_  
 Research on New Materials



## ● Ochang Techno Park

Area\_ 248,209 m<sup>2</sup>  
 Major Business\_  
 -Rechargeable Batteries  
 -Optical Materials, etc



## ● Naju Plant

Area\_ 562,793 m<sup>2</sup>  
 Major Business\_  
 Octanol, Butanol, Plasticizer,  
 Acrylic Acid



## ● Yeosu Plant

Area\_ 991,735 m<sup>2</sup>  
 Major Business\_  
 VCM, PA, SM, Acrylates, PVC,  
 ABS, EDC, PS, SAN, LDPE, Octanol



## ● Ulsan Plant

Area\_ 413,785 m<sup>2</sup>  
 Major Business\_  
 -Housing Materials  
 -Living Materials  
 -Automotive Materials  
 -Plasticizer



## ● Iksan Plant

Area\_ 94,636 m<sup>2</sup>  
 Major Business\_  
 ABS Compound,  
 Engineering Plastics, etc.



## ● Cheongju Plant

Area\_ 350,781 m<sup>2</sup>  
 Major Business\_  
 -Building Materials  
 -Living Materials  
 -Information & Electronic Materials



## ● Onsan Plant

Area\_ 209,376 m<sup>2</sup>  
 Major Business\_  
 Fluorescent substance



## ● Daesan Plant

Area\_ 1,297,477 m<sup>2</sup>  
 Major Business\_  
 VCM, PVC, Ethylene, Propylene,  
 Benzene, BD, HDPE, LDPE, etc





“  
Nature is  
the playground of innocent children

”

We look at to the birds flying overhead.

We see further, and notice clouds drifting slowly by.

Like poets, we think of names for motion we never noticed before.

Long grasses in the breeze wave to us in greeting.

Nature is the playground where a child's imagination can unfold.

LG Chem understands the purity and innocence of nature.





01

# Environmental Management

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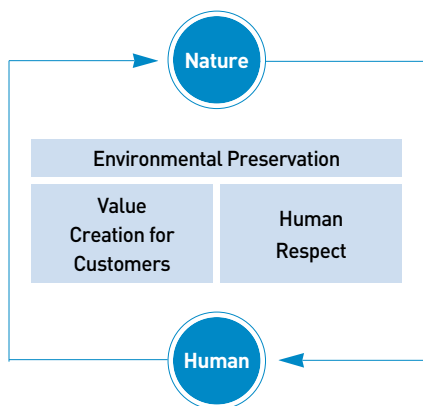


Environmental Management Vision and Strategies	Environmental Management System (EMS)	Environmental Accounting (EA)	Environmental Performance Evaluation (EPE)	Emergency Response System
17	18	20	21	22

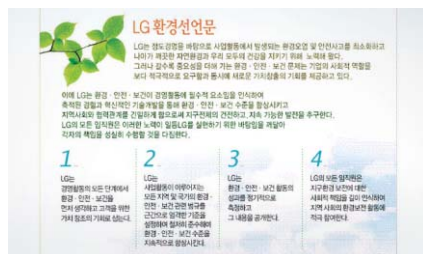
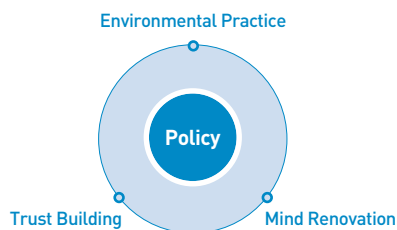


# Environmental Management Vision and Strategies

## ● Environmental Philosophy



## ● Environmental Policy



● LG Environment Declaration

### 01 | Environmental Philosophy

In pursuit of a harmonious blend of people's lives and nature, LG Chem adheres to eco-friendly practices to help preserve nature and the community and to create greater values for customers.

- The Company faithfully fulfills the role of corporate citizen and pursues mutual prosperity through social contribution, fair business practices, and the preservation of the global environment [Section 4, Article 1, LG Management Charter].
- The Company makes every effort to prevent pollution and protect nature with responsible environmental stewardship [Section 4, Article 6, LG Code of Ethics].

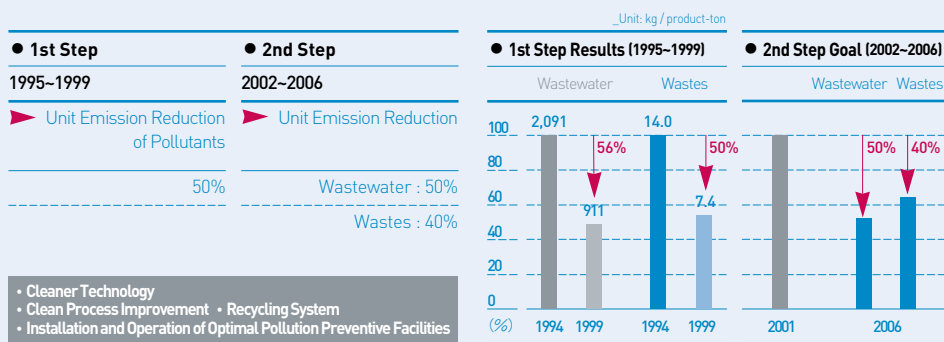
### 02 | Environmental Policy

Environmental policy directed to realizing our environmental philosophy resolve into the following three points: Environment-friendly practices, innovative thinking, and trustworthy management. All employees at LG Chem work together to make environmental preservation a high priority in the Company's activities for the harmonious progress of people and nature. In short, environmental policy emphasizes the following five fronts:

- Our business activities strictly abide by the laws and regulations of Korea and global communities where we operate.
- We gear efforts for improvement in the global environment under environmental goals.
- Our environmental concerns go full spectrum from the development of eco-friendly technology, product design, manufacturing and end user features to disposal.
- We work as corporate citizens and carry out day-to-day performances firmly based on environmental management.
- We are keenly aware that every one of us is responsible for environmental preservation and that environmental performance must be clarified to the public.

### 03 | Environmental Goals

In 1995, LG Chem set environmental management policies that have been directed to the Company's ultimate environmental goal - Pollutant Emission 'Zero'. To effectively achieve the goals, phase-by-phase master plans were reset to reduce wastewater, and wastes. Today, the Company gears toward realizing the second-phase goals.

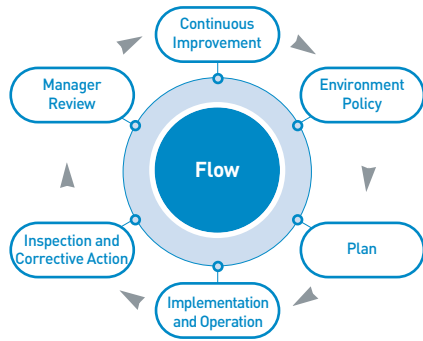


- In the first step (1995-1999) the goals for unit emission reduction of wastewater and wastes from the source of origin were surpassed, by 56% and 50%, respectively.
- The goals of the second step (2002-2006) were reset due, in large part, to business expansion in information and electronic materials and the group-wide spin off of subsidiaries. The second phase aims to reduce the unit emission of wastewater by 50% and wastes by 40%. To reach these goals, the development of alternative material resources, new manufacturing processes, and wastes treatment technology is accelerated in line with activating energy saving practices.



# Environmental Management System (EMS)

## ● Environmental Management System Flow



Responsible Care		
<ul style="list-style-type: none"> <li>• ISO 14001</li> <li>• Environmentally Friendly Company</li> </ul>	<ul style="list-style-type: none"> <li>• OHSAS 18001</li> <li>• KOSHA 18001</li> </ul>	<ul style="list-style-type: none"> <li>• Voluntary Agreement (VA)</li> </ul>



- RC Committee
- ● Environment Education
- ● ● Management Innovation Case Study Book

LG Chem's environmental management is incorporated with Responsible Care initiatives, a collection of voluntary initiatives designed to take responsibility for the safety and health of people and the environmental preservation. Rigorous environmental management practiced throughout the Company's worksites resulted in acquisition of ISO 14001, a certificate qualifying environmental management, OHSAS 18001, and KOSHA 18001, a certificate for health and safety management. All worksites were designated as Environmentally Friendly Company by the Minister of Environment of Korea.

LG Chem redefines the standards of Environment, Health, and Safety (EHS) Management continuously to reflect evolving regulations and technological advancement and to provide current guidance to employees through regular training programs. The results of EHS Management are reviewed periodically by internal and external audits. The results are reported to top management of each establishment in due course to facilitate sustainability.

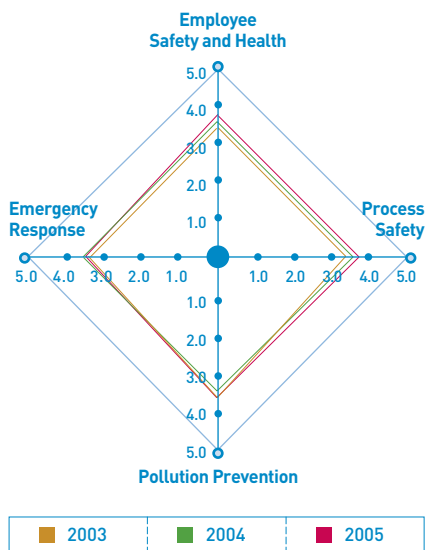
## 01 | Responsible Care Committee

In 1991 we established "Environment and Safety Committee" with the objective of promoting eco-friendly management in a systematic manner. Since then, activities of the Environment, Health, and Safety (EHS) Management Committees, one in each establishment, are integrated under the LG Chem Responsible Care (RC) Committee. The RC Committee serves as a centerpiece for company-wide coverage of responsibility in EHS Management. The RC Committee's general meeting, held twice a year, provides an integrated assessment of EHS and energy management to each EHS committee, including an array of issues and solutions, and a framework of related policies. The EHS committees, in turn, share information on critical issues, successful EHS Management cases, and other mutual concerns.

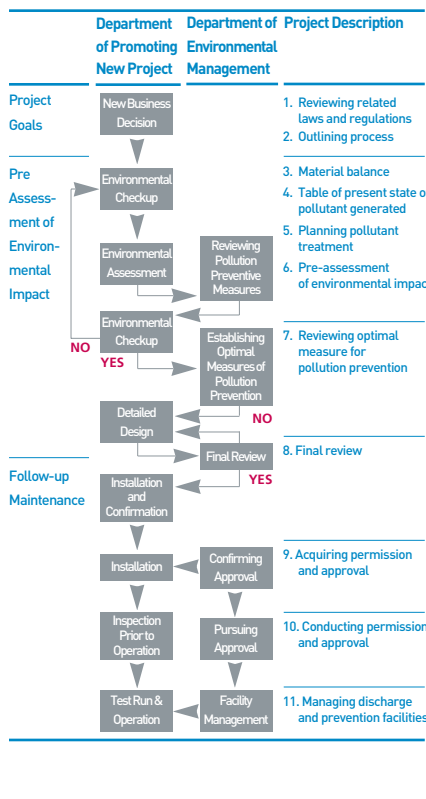
## ● Environmental Policy

RC Responsible Care		Resource Procurement	Product Development	Production	Sales / Distribution	Service
Production Team at Plant	Business HQ / Business Division	Using environment-friendly and safe raw and supplementary materials	Considering environment, safety and health when developing products	Minimization of environmental impact load Securing of worker's health	Prevention of distribution-related accidents and emergency response when an accident takes place	Providing environment, safety and health information related to products
				Considering environment, safety and health when planning investment		
Environment & Safety Dept.	Plant	Environment, safety and health management and support				
	Head Office	Planning and supporting of enterprise environment safety and health policy	RC operation on the corporate level			

● RC Self-Assessment Result



● Pre-Environmental Impact Evaluation



02 | Innovation in EHS Management

In 1999 LG Chem rolled out Six Sigma systems to secure product leadership and the highest quality standards in the market. By 2003 Six Sigma had been extended to our Environment and Safety practices and non-production activities. These initiatives have yielded tremendous results for our Environment, Health and Safety Management efforts, bringing about remarkable reductions in solid and airborne wastes. And, since establishing a waste management information system, we have improved our waste water recycling rate and other production processes. Among our Six Sigma projects for 2005, ten involved the construction of environment and safety IT systems, and a further five “Black Belt” Process Safety Management (PSM) projects were implemented in various production plants.

03 | EHS Training

EHS Management has been instilled in the minds and actions of all employees through regular EHS education programs differentiated by job positions and tasks. Each establishment cultivates RC experts by providing in-house specialist EHS courses in line with intensive EHS training courses conducted by professional external organizations.

04 | In-house Audit and Post Inspection

An in-house audit team formed in each establishment carries out EHS Management audits twice a year. Areas in need of improvement are reported to top management in each establishment. Relevant divisions are responsible for redressing shortcomings. After the acquisition of environment-related certificates, post inspection of EHS management practices is carried out by related external organizations at least once a year. Besides the external inspection, in-house audits also evaluate the performance standards based on ISO 14001 and KOSHA 18001 certificates. The Company promotes an integration of varied in-house assessments based on the results of Responsible Care initiatives.

05 | Self- Assessment of RC Activities

Responsible Care (RC) initiatives are largely focused on four fronts: Employee Safety & Health; Process Safety; Pollution Prevention; and Emergency Response. Since 2002, RC activities have been assessed by measures specifically set in each establishment and reflected in RC upgrades. The assessment results in 2005 showed improvement in all our areas compared with the year 2004, with scores of 3.5 to 3.8 points, signifying Practice-in-Place (PP) standard.

06 | Environment and Safety Inspection

An environment and safety inspection team is composed of external experts and internal persons in charge of related areas in each establishment. To ensure safety and health in workplaces, nature, and the community, the team carries out an environment and safety inspection on a company-wide scale annually. Inspection criteria, pursuant to EHS Management guidelines, emphasize the observance of related regulations and laws, optimal maintenance of environmental and safety facilities, and reduction of potential risk factors through proactive measures.

Since 2004, an overall environment and safety inspection has been carried out in the Company’s China, Vietnam, and India subsidiaries. It was intended to narrow the gap between LG Chem’s domestic and overseas subsidiaries, thus elevating the overall standards of EHS Management in the Company’s overseas subsidiaries. The environment and safety inspection, differentiated by specific conditions of each establishment, is carried out weekly or monthly in line with EHS Management monitoring.

# Environmental Accounting (EA)

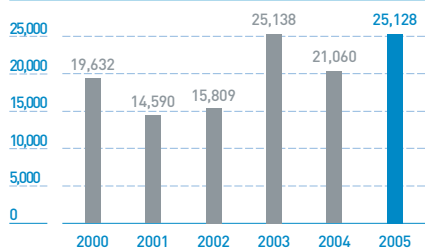
Environmental Accounting is applied for cost-effective investment in environment and safety management. It enables grasp of cost effectiveness and optimal budget allocation in minimizing environmental impact derived from various business activities. The accounting statement is reflected in management decision making, and is available to outside interested parties.

With the experience accumulated through participating in trial Environmental Accounting projects, led by the Ministry of Environment since 2002, LG Chem has started environment-related cost accounting by utilizing the table of environmental management costs classified under the Korean government's Environmental Accounting Guidelines. Since accurate Environmental Accounting can increase management transparency and efficiency, LG Chem is developing a fully computerized Environmental Accounting system linking to the enterprise resources planning (ERP) system.

## • Environmental Costs

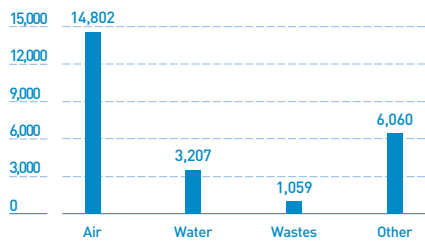
\_Unit: Millions of Korean Won / year

### • Environmental Investment



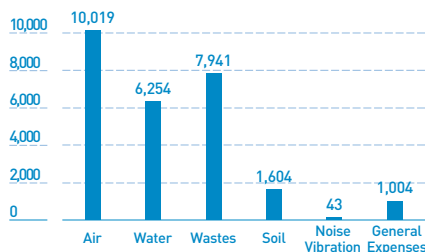
\_Unit: Millions of Korean Won / year

### • Breakdown of Environmental Investment (2005)



\_Unit: Millions of Korean Won / year

### • Breakdown of Environmental Costs (2005)

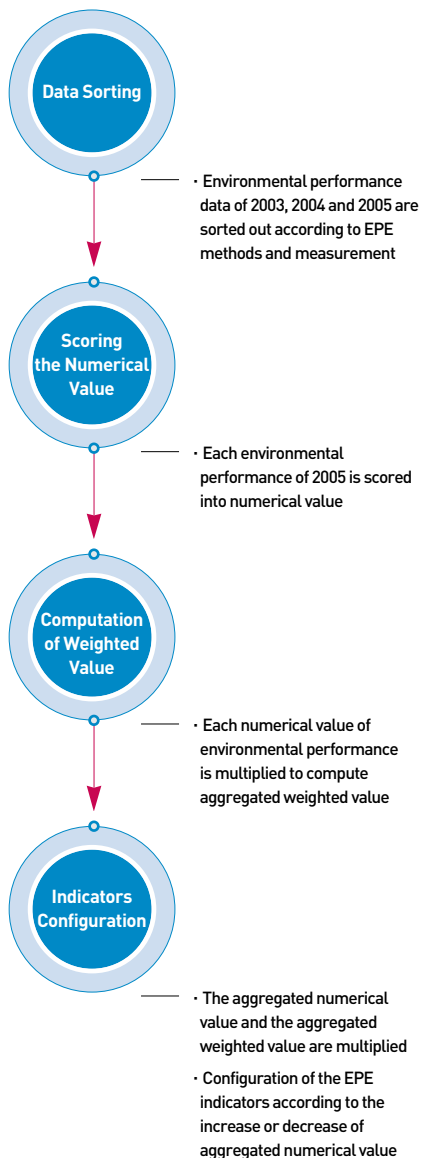


Environmental Costs			
Post Treatment Expenses	Expenses for Preventive Activity	Expenses for Activities of Interested Parties	Legal Reserves and Expenses for Environmental Restoration Activities
<b>Post Treatment Facilities Operational Expenses</b> <ul style="list-style-type: none"> <li>Expenses for operating in-house facilities</li> <li>Treatment expenses paid to contractors</li> <li>Other</li> </ul>	<b>Expenses for Operating Environmental Management System (EMS)</b> <ul style="list-style-type: none"> <li>Expenses for EMS-related certificates</li> <li>Expenses for training</li> <li>Expenses for environmental impact surveys and inspections</li> <li>Other</li> </ul>	<b>Expenses for Outside Cooperation</b> <ul style="list-style-type: none"> <li>Expenses for supporting environment-related NGOs</li> <li>Expenses for community cooperation</li> </ul>	<b>Legal Reserves</b> <ul style="list-style-type: none"> <li>Expenses for contributions and donations (dues)</li> <li>Fines</li> </ul>
	<b>Expenses for Material Resources Saving and Recycling Activities</b> <ul style="list-style-type: none"> <li>Expenses for operating in-house facilities</li> <li>Treatment expenses paid to contractors</li> <li>Energy saving and climate change reserves</li> <li>Expenses for improving logistics and distribution</li> <li>Other</li> </ul>	<b>Expenses for Other Activities</b> <ul style="list-style-type: none"> <li>Expenses for outside environmental preservation and forestation</li> <li>Expenses for publishing environmental advertisements and reports</li> </ul>	<b>Expenses for Environmental Restoration Activities</b> <ul style="list-style-type: none"> <li>Expenses for indemnities and litigation</li> <li>Insurance premiums</li> <li>Other</li> </ul>
	<b>Expenses for Research and Development</b> <ul style="list-style-type: none"> <li>Expenses for process improvement</li> <li>Expenses for product quality improvement</li> </ul>		
	<b>Expenses for Other Activities</b> <ul style="list-style-type: none"> <li>Expenses for workplace tree planting</li> </ul>		



# Environmental Performance Evaluation (EPE)

## • EPE Methods



Performances related to environmental management is analyzed, assessed, and clarified to the public. The evaluation results are reflected in decisions concerning social and environmental matters for sustainable development.

As to strategically strengthening environmental management and communication with interested parties, LG Chem included an integrated evaluation system incorporating the Six Sigma system to measure its environmental performances accurately.

Analyzing the indicators specified in the Global Reporting Initiative (GRI) table and ISO 14031 guidelines, indicators suitable for measuring LG Chem's environmental performances were sorted out, and the method for computing weighted value was developed to assign numerical value to each environmental performance.

The pilot test for the evaluation system clearly shows the improvement or deterioration of the environmental performance year after year. In coming years, the evaluation indicators will be upgraded to properly measure environmental performance of each establishment in detail and will be used throughout the Company as key performance indicators (KPIs).

## • EPE Indicators

EPE Indicators			
Classification	Sub-Classification		Evaluations
Internal	Management Performance	01. Environmental Management System	• Observance of environmental management guidelines specified in the ISO certificate
		02. Observance of Regulations and Laws	• Responsible management through the observation of environment-related regulations and laws
		03. Application of the Latest Environmental Management System	• Improvement of corporate value and capabilities by applying the latest environmental management system
		04. Relationship with the Community	• Sustainable progress of the community sought through the establishment of a close relationship with community people and responsible environmental management
	Operational Performance	01. Input	• Efficient use of materials and energy and cost-reduction activities
		02. Output	• Tangible and intangible outcomes made for pollutant reduction and environmentally-friendly production
External		01. Status of Environmental Pollution in the Community	• Pollutant management improved steadily through surveys of environmental pollution in the communities

# Emergency Response System

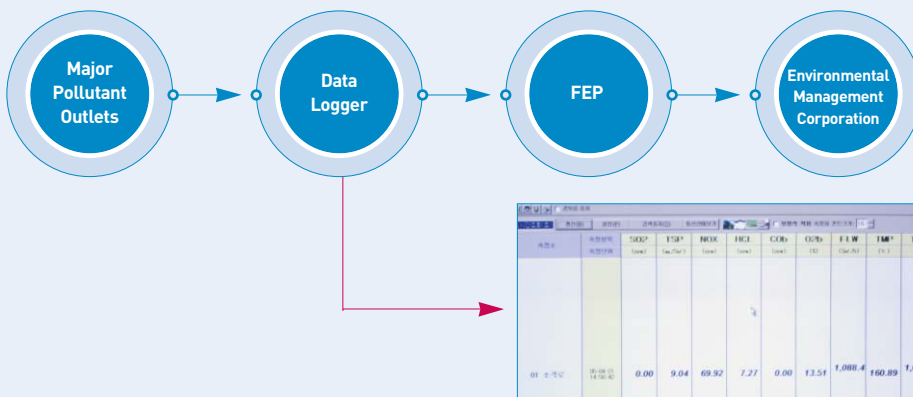
## 01 | Prevention of Environment and Safety Risks and Accidents

LG Chem anticipates environment-related problems to proactively prevent any environment and safety risks. On this ground, the environment and safety team and each production team conduct regular environment and safety inspections. The environment and safety team operates an exclusive patrol team for major facility inspection for 24 hours. Intensive inspection by the patrol team takes place in those areas deemed most vulnerable to emitting polluted substances due to malfunction in processing lines. Crosschecks on environmental facilities by the environment and safety team and each production team doubly ensure pollution prevention.

## 02 | Tele-Monitoring System (TMS)

The TMS is installed in major pollutant outlets. It monitors and records the operational status of air-pollution prevention facilities and wastewater treatment plants in real time. When pollutant emission exceeds the standard level, an alarm is automatically activated to allow immediate control. It is a key step to prevent environmental risks and disasters beforehand. TMS data is transmitted online to relevant government organizations via the TMS Control Center of the Environmental Management Corporation.

### • TMS Data Transmission



● Real Time Management (TMS)



● Emergency Reservoir (Yeosu)  
● Emergency Drill for Spill Prevention (Cheongju)



● Emergency Control Center (Yeosu)

**● Flow of Emergency Response during Distribution**

**Shipment Preparation**

**LG Chem**

- Check adequacy of operator and vehicle
- Vehicle safety education and provision of emergency response information

**Driver**

- Compliance with shipment safety rules
- Vehicle inspection and familiarization of emergency response information

**Transportation of Chemicals**

**LG Chem**

- Check safe transportation

**Driver**

- Compliance with traffic laws and regulations
- Operation of designated route (Pre-education on the passage prohibited area)

**Emergency Response in the Case of Accident**

**LG Chem**

- Operation of emergency response commission
- Mobilization of emergency response unit
- Support request (Public offices, suppliers, etc)

**Driver**

- Initial response (Prevention of diffusion, blockade the surrounding)
- Emergency contact (LG Chem)

**Completion of Transportation**

**LG Chem**

- Check the safe arrival at a destination

**Driver**

- Compliance with safety rules at a destination
- Notification of completion of transportation (LG Chem)

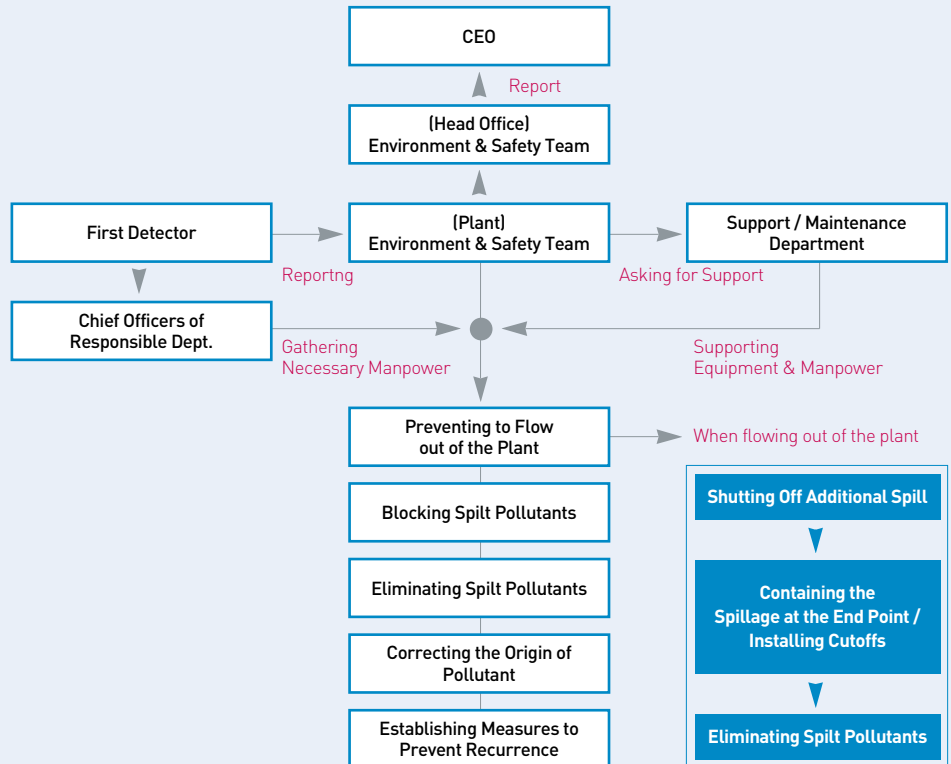


● Drivers' Safety and Emergency Response Manual

**03 | Emergency Response**

For prompt action in the event of accidents, emergency handling scenarios are prepared according to different emergency types and facilities. Each production site exercises a regular emergency drill. Looking closely at the results of each emergency drill can identify shortcomings, lead to supplementation through countermeasure upgrades, and improve future emergency drills to further ensure airtight safety.

**● Flow of Emergency Response (Spill)**



**04 | Emergency Response during Distribution**

In the event of toxic chemical spill inside the Company, the problem or damage can be promptly controlled with in-house cutting-off facilities and measures on top of a streamlined emergency network. However, considering traffic conditions in Korea, response to environmental accidents or spill during the transportation of chemicals requires additional measures. Accordingly, LG Chem strives to eliminate any risks or disasters throughout distribution channels from product shipment to delivery. Emergency response drills and training programs are provided to drivers and distributors so can they build capabilities to handle problems in the event of a disaster. The Company also provides emergency response manuals and vehicle inspections, as well as operating an emergency team and network.



The background is a vibrant green with a textured, painterly appearance. In the upper right, a dragonfly is depicted with white outlines and fine lines on its wings. In the lower left, there are stylized grasses or reeds, also outlined in white. The overall composition is natural and serene.

“  
Nature is  
the ultimate classroom ”

We learn about the real world by being in the real world.  
Every insect's wing, every blade of grass contains countless lessons.  
Nature knows what is best for Nature,  
and here we will find the answers to every problem.  
LG Chem is at the front of Nature's classroom,  
taking our lessons from the wisest teacher.





02

# Environmental Impact & Performances

Environmental Performances	27
Energy	34
Response to the Convention on Climate Change	36
Safety and Health	38
Eco-Products	40



\* Environmental Impact & Performances



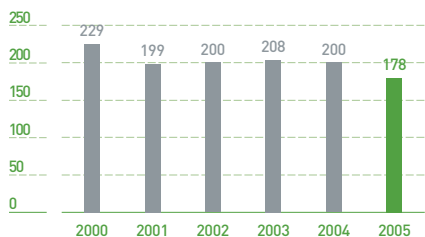
Environmental Performances	Energy	Response to the Convention on Climate Change	Safety and Health	Eco-Products
<ul style="list-style-type: none"> <li>_ Air Quality</li> <li>_ Water Quality</li> <li>_ Wastes</li> <li>_ Toxic Chemicals</li> <li>_ Soil Pollution</li> </ul>				
27	34	36	38	40



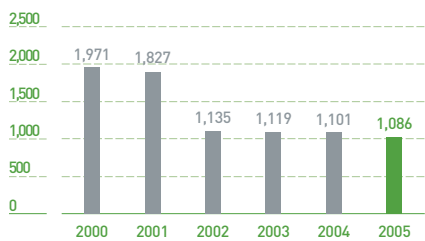
# Environmental Performances

## \_ Air Quality

● **Dust Emission** \_Unit: tons / year



● **SOx Emission** \_Unit: tons / year



● **NOx Emission** \_Unit: tons / year



LG Chem reduces air pollutants from the source of origin through improving basic production processes and utilizing eco-friendly materials and fuels. Pollutants and industrial wastes generated from production activities are treated in pollution preventive facilities. To ensure optimal treatment, a regular inspection is carried out facility by facility according to a checklist. A Tele-Monitoring System installed in major pollutant outlets screens the level of air pollutants. It transmits real-time data to the TMS Control Center operated by the Environmental Management Corporation. Non-point pollution sources are detected with a portable detector. If a problem is found in a related facility and device, immediate repair work or replacement follows. By curtailing air pollutants, the Company manages an air pollutant level within 40% of the legal standard.

When the Foul Odor Prevention Act in Korea went into effect in 2005, the legal standard for air pollutant emission of the Clean Air Conservation Act was brought to a higher level. LG Chem proactively prepared countermeasures with the investment of KRW13.1 billion in 2004, and KRW17.7 billion in 2005 for the alteration of clean fuel resources, manufacturing process improvement, and renovation of pollution preventive facilities.

We will continue to inspect and replace old pollution preventive facilities with highly efficient and optimized facilities.

- **Yeosu Plant:** Here we have already invested a total of KRW1.2 billion to increase the efficiency of the plant's condensation process. In doing so we eliminated the foul odors resulting from the previous system, and by converting the boiler's fuel source to eco-friendly LNG we greatly reduced the volatile organic compounds (VOCs) emitted by the plant. To prevent leakage of VOCs and offensive odor, VOC pumps are replaced with non-seal pumps while wastes of odorant sources are incinerated in the regenerative thermal oxidizer (RTO).

- **Cheongju Plant:** It is a challenge with this type of plant to reduce VOC emissions and noxious gases without the catalytic cleaning processes being damaged by catalytic poisons. With an investment of KRW1.5 billion, we installed a state-of-the-art Regenerative Thermal Oxidizer (RTO) at Cheongju, and with a further KRW700 million we put in a new Absorption Column. With these two assets in place, we have significantly reduced our waste gas emissions and increased our recovery rate of recyclable gases.



● RTO (Yeosu)



● Non-seal Pump (Yeosu)

● **Reduction of Foul Odor through the Use of Odor Map**

- Increase of interest in environment / health
- Strengthening of various restrictions related to offensive odor

**Carrying Out the VOC / Odor Map Project**

- On site survey
- Identification of bad odor generation materials' source and generation trend
- Identification of major component of offensive odor
- Identification of generated volume through quantitative analyses
- Measurement of distribution on the bad odor within business sites

**Expected Effect**

- Identification of offensive odor, major components of VOC and emission volume by process
- Evaluation of impact upon the surrounding of offensive odor and VOC
- Formulation of guidelines for optimal prevention facilities

• **Ulsan Plant:** The Ulsan Plant has so far received a total investment of KRW530 million, which was used to upgrade the plant's RTO and integrate liquid catalyst facilities in each printing process.

• **Naju Plant:** At Naju we have spent KRW190 million to replace a deodorizing column and replace outdated equipment. We also invested a further KRW230 million in a Tele-Monitoring System (TMS) for the plant's wastewater incinerator facilities. With the TMS, we are able to optimize burning conditions, minimize fuel usage and monitor airborne emissions on a real-time basis.

● **2006 Air Quality Improvement Plans**

Air			
Plants	Plans	Investments (KRW)	Improvement Effects
Yeosu	• Improvement of gas emission treatment facilities at wastewater treatment sites	600 million	• Reduction of air pollutant
Yeosu	• Installation of TMS in 2AA process of wastewater burning facilities	230 million	• Real-time monitoring of air pollutant
Yeosu	• Installation of compressor for collecting gas from PVC processes	200 million	• Prevention of air pollutant leakage
Cheongju	• Change of VOC processing facility for precision coating	450 million	• Reduction of air pollutant
Cheongju	• Installation of waste gas treatment facility	390 million	• Reduction of air pollutant
Cheongju	• Improvement of work environment through the improvement of exhaust systems (Duct / Hood)	100 million	• Reduction of air pollutant and improvement of work environment
Ulsan	• Replacement with high-efficiency prevention facility at printing process	430 million	• Reduction of air pollutant
Ulsan	• Integration of small-scale power collecting facilities	250 million	• Reduction of air pollutant
Ulsan	• Change of major components of power collecting facilities	250 million	• Reduction of air pollutant
Naju	• Change of power collector	300 million	• Reduction of air pollutant

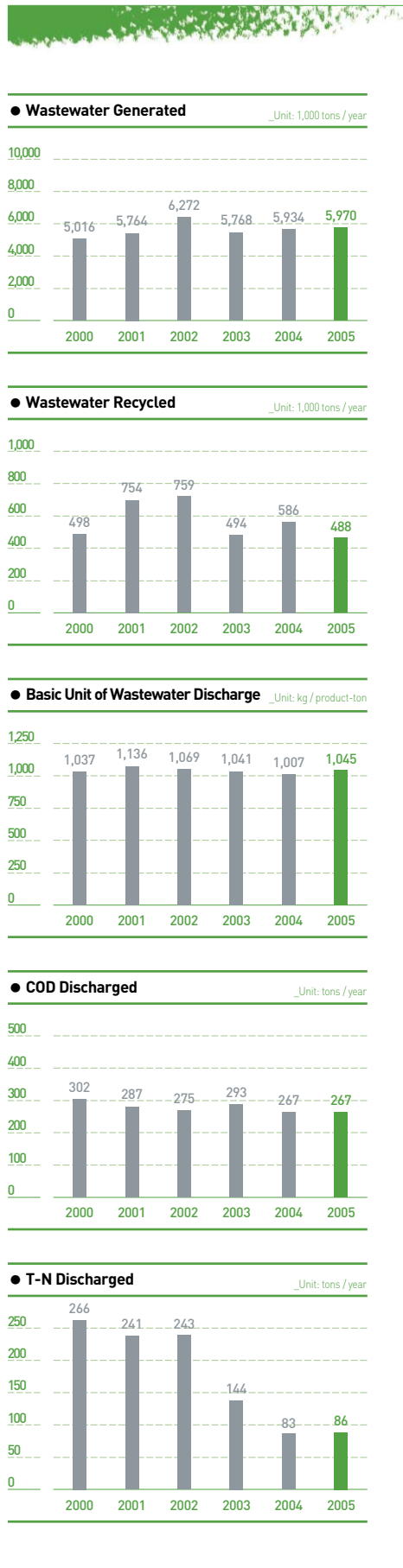
**Water Quality**



● Wastewater Treatment Plant (Yeosu)

In 2005, LG Chem used 2,000m<sup>3</sup> of water of which 97% was industrial water and 3% underground water. Water is used mainly in manufacturing lines, for cooling, fire hydrants, as well as tap water. Wastewater is treated in the wastewater treatment plant operated at each production site and discharged directly to a nearby river or retreated in the wastewater terminal treatment plant. Sewage is sent through separate pipes to the sewage terminal treatment plant. Under the ultimate environmental goal, - Pollutant Emission 'Zero', LG Chem puts all-out efforts into reducing the total volume of wastewater with reduction plans set at each wastewater facility. Improvement in processing lines and the recycling rate of wastewater contributes to the reduction.

• **Yeosu Plant:** With a KRW350 million investment we replaced an old cooling tower at Yeosu, and the resulting increase in the process's cooling efficiency allowed a significant reduction in the production of wastewater. In 2006 we invested a further KRW900 million to



expand and improve aging production facilities and reduce wastewater emissions by 30 cubic meters per day. By using pH control to recycle wastewater, we were able to cut back on an equal volume of industrial water consumption.

• **Cheongju Plant:** Here we have upgraded our wastewater treatment system to recycle lightly-contaminated wastewater and to reduce the volumes of water used by the high-consumption polarization plate production lines. To prevent reduction in water treatment efficiency caused by worn-out equipment, we replaced or repaired the Cheonju plant's Drug Mixing Chamber, Neutralization Chamber and Surface Separation Chamber. We also subject our treatment facilities to frequent inspections to guard against any incidents of accidental release of water-borne contaminants. To further ensure against such accidents, we will soon move the plant's major wastewater pipelines underground.

• **Naju Plant:** At the Naju plant we upgraded our wastewater management systems by installing a 24-hour monitoring system, and invested KRW250 million to improve the efficiency of the cooling tower, thereby cutting down on the volume of wastewater produced in cooling processes. In addition, with an investment of KRW150 million we changed gas freezing facilities and non-reacting carbon processing facilities, and increased carbon removal efficiency in the wastewater. During 2006, we will invest a further KRW500 million in recycling facilities to reduce the volume of industrial water usage at the Naju plant.

• 2006 Water Quality Improvement Plans

Water			
Plants	Plans	Investments(KRW)	Improvement Effects
Yeosu	• Extension of pure water production facilities	900 million	• Reduction of wastewater discharge facilities
Cheongju	• Change of wastewater pipe-lines	120 million	• Prevention of environmental ccidents
Naju	• Installation of wastewater recycling facilities	500 million	• Increase of wastewater recycling volume • Reduction of industrial water usage volume



• Wastewater Treatment Plant (Ulsan)



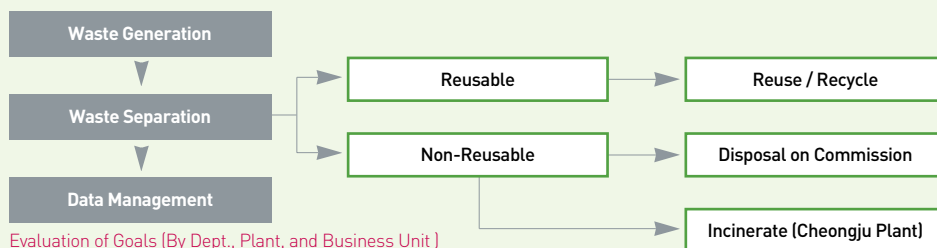
• Water Quality Control plant (Ochang)



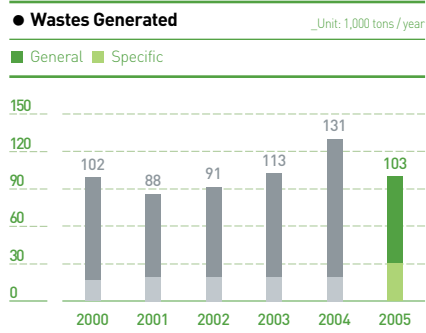
## Wastes

LG Chem thoroughly screens the status of wastes treatment in each production site from wastes discharge to final disposal in real time via the "Wastes Manifest System", a website operated by Korea Environment and Resources Corporation. As for outsourced wastes management, the Company carries out an annual inspection and maintenance service for wastes treatment and recycling contractors. In line with the environmental goal, - Pollutant Emission 'Zero'- the Company has made every effort to minimize the volume of wastes from the source and maximize the recycling rate of wastes.

### • Flow of Waste Management



• **Yeosu Plant:** We continue to make investments that reduce waste production and increase resource reutilization rates. At Yeosu we spent KRW1.1 billion to upgrade the plant's wastewater incinerators, and another KRW100 million on driers to reduce the volume of condensed residues that remain high in water and latex content. A total of KRW150 million was invested in the installation of additional jet cleaner which allows for the reduction of wastes volume by completely removing the residue scale in the reactor. Our strong efforts are being made to recycle wastes. During 2006 we plan to change dehydrator in wastewater treatment site and recycle wastes through reducing the percentage of water content in activated sludge by 45%.



● Wastes Storage Yard (Cheongju)

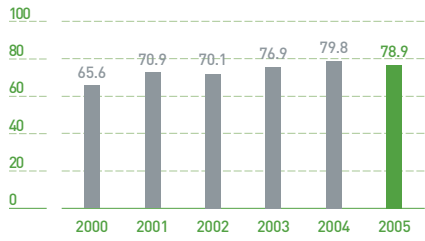


• **Cheongju Plant:** The Cheongju plant has operated its own 1.3ton/hr in-house incinerator since 1992. Steps taken to improve its efficiency include a KRW150 million investment in smashing facilities and construction of a screw-type conveyor to reduce the generation of dust and flying ash. We also installed a water softener, which improves the efficiency of steam production and prevents scaling within the combustion chamber. In 2006 we will further improve the incinerator's efficiency by installing a new hoist to improve the feeding efficiency of the incinerator.

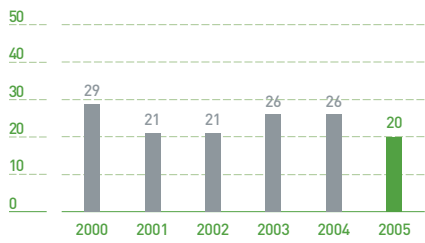
• **2006 Wastes Improvement Plans**

Wastes			
Plants	Plans	Investments(KRW)	Improvement Effects
Yeosu	• Change of dehydrator in wastewater treatment facility	400 million	• Recycling of activated sludge • Reduction of wastes
Naju			
Ulsan	• Rebuilding workplace for cleaner room	500 million	• Reduction of wastes through the prevention of defective goods

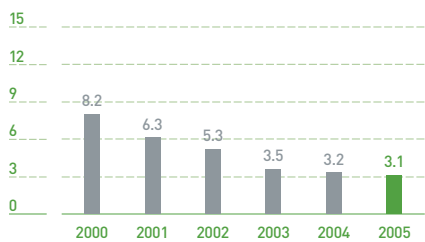
• **Wastes Recycling Rate** \_Unit: %



• **Wastes Discharged** \_Unit: 1,000 tons / year



• **Basic Unit of Wastes Discharge** \_Unit: kg / product-ton



• Wastes Incinerator (Cheongju)

## \_ Toxic Chemicals



● Signing the Voluntary Agreement (VA) for Reducing Toxics Release

### ● Basic Unit of the Use of Toxic Chemicals \_Unit: tons/product-ton



● The use of toxic chemicals shows an increase since ethylene dichloride (EDC) was added to the toxic chemical category in 2001.

LG Chem carries out rigorous management of toxic chemicals from warehousing to disposal. MSDS (Material Safety Data Sheet) for safe handling of toxic chemicals are prepared for all processing lines, and regular trainings are provided to all personnel involved in toxic chemical handling. To prevent any leakage accidents, monthly inspections are conducted at all sensors and interceptors installed in warehouses. Toxic chemicals are additionally stored separately for emergency use and an emergency drill is conducted monthly. The use of toxic chemicals has been reduced each year through application of alternative materials and treating methods. Although the unit use of toxic chemicals showed an increase in 2004, due to ethylene dichloride (EDC) being included in the toxic chemical category since 2001, the average usage of toxic chemicals each year has been reduced due to scientific management including toxics release inventory (TRI).

In December 2004, LG Chem signed a voluntary agreement (VA) on Toxics Use Reduction, part of the Ministry of Environment policies. To comply with the VA, the Company aims to reduce use of toxics by 30% within three years (2007) and 50% within five years (2009), by steadily improving processing methods and applying a resources recovery system. We also introduced a leak detection and repair (LDAR) system that is designed to reduce the volume of toxic chemicals emitted to the air through non-point pollution sources, e.g. pump, valve and flange.

### ● 2006 Toxic Chemicals Improvement Plans

Toxic Chemicals			
Plants	Plans	Investments(KRW)	Improvement Effects
Yeosu	• Installation of toxic gas monitoring systems	150 million	• Prevention of toxic gas leakage



● Protectors of Toxic Chemicals



● Leak Detection and Repair (LDAR)

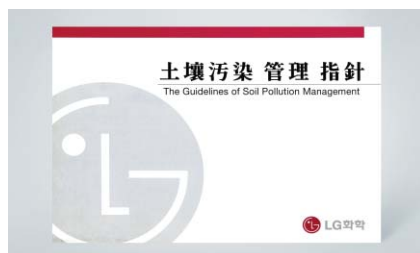
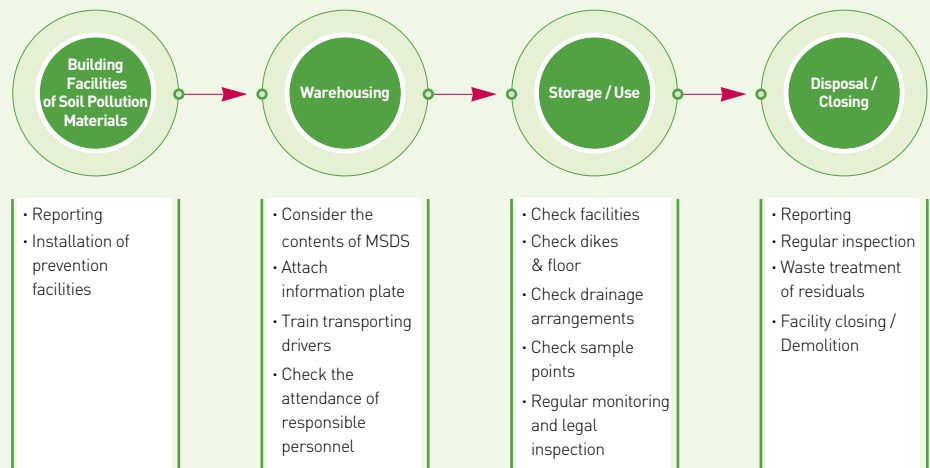


## \_ Soil Pollution

At LG Chem, soil pollution management mainly addresses the issues of prevention of soil contamination and treatment of contaminated soil. The soil management manual strictly governs procedure from construction to disposal of soil-contaminating facilities in all production sites. In case of building the soil-contaminating facilities, we examine the matter thoroughly with relevant divisions of the Company in advance. To prevent pollutants permeating the soil, soil-contaminating facility area is paved with concrete and waterproofed. Dikes are installed to block pollutant outflow. Regular inspections ensure watertight soil management.

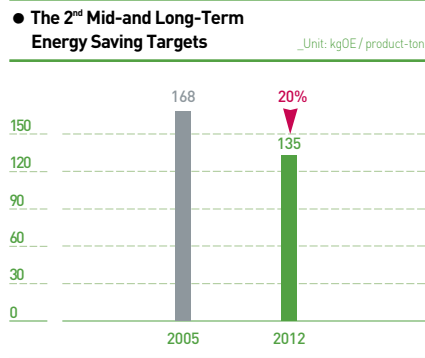
In 2004, surveys of soil conditions at soil-contaminating facilities in LG Chem's plants showed favorable conditions within legal limits according to the Soil Environment Conservation Act of Korea. For proactive soil conservation practices, the in-house Soil Management Manual is circulated to all plants. The Company continues examinations for soil and underground water quality in an effort to protect people and nature.

### • Flow of Soil Pollution Management



• The Guidelines of Soil Pollution Management

# Energy



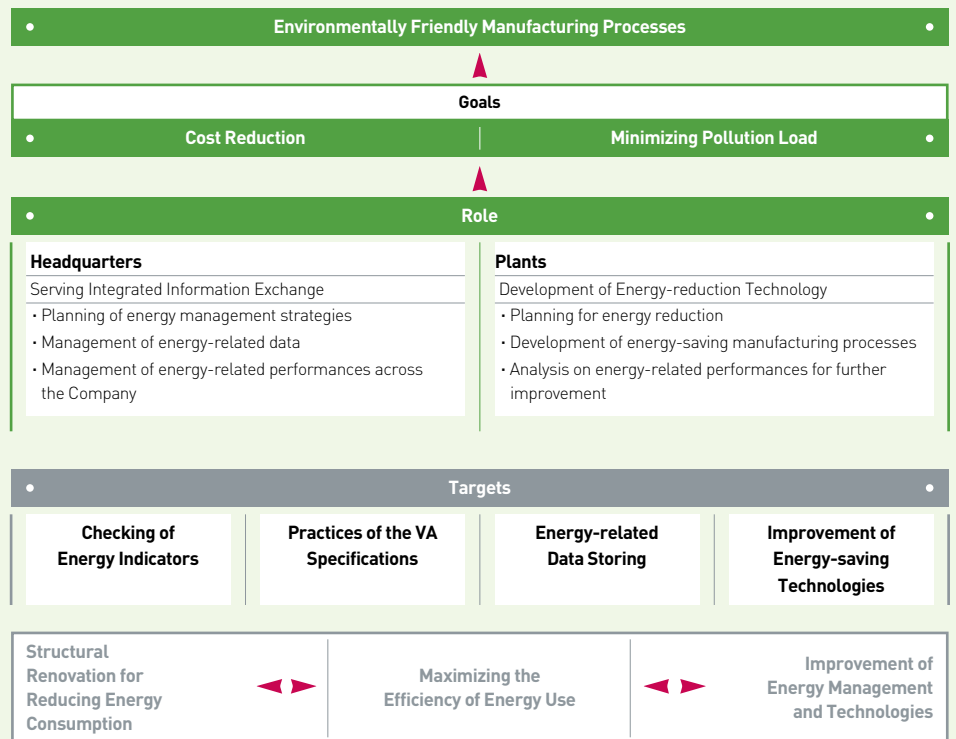
- Certificate of a Superior VA-practiced Company
- 2005 Innovative Energy Saving Case Study Group

LG Chem prioritizes energy reduction activities as part of building corporate strength to succeed whatever the business climate may bring. The Company's energy management at all production sites is directed to solidifying the foundation for environmentally friendly production processes through maximizing the use of energy resources and thus minimizing costs and the environmental load.

## 01 | Energy Management Vision and Targets

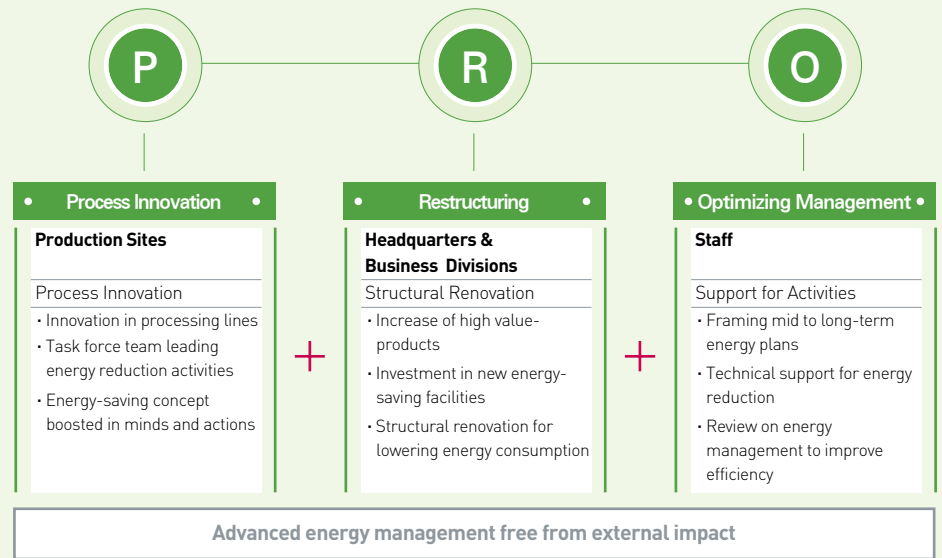
As for energy saving strategies, the Company set the mid-term (from 2005 to 2012) goal of energy reduction by 20%. To achieve this goal, the Energy Impact Free (EIF) PRO campaign has been carried out across the Company backed by process innovation at all production sites, organizational restructuring for low-energy consumption, and effective support activities.

### ● Energy Management Vision and Targets





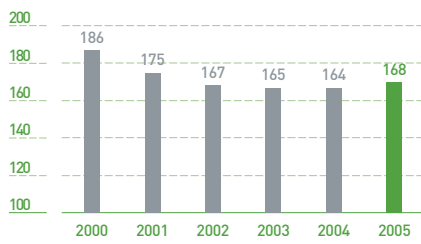
• Energy Impact Free (EIF) PRO campaign



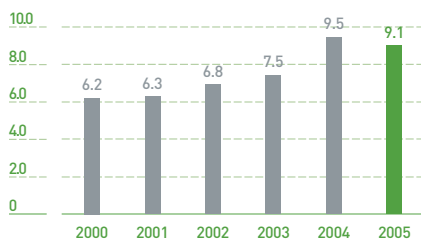
02 | Energy Saving Activities

All production sites at LG Chem combine efforts with the task force team in creating energy-saving products and benchmarking outstanding cases of energy-saving products and production processes. At the same time, each production site drives an energy saving campaign year round, forging an energy-saving mindset. As a result, energy intensity has been improved each year. In 2005, our production volume was lower due to unfavorable business environment caused by elevated oil prices and strong Korean currency.

• Energy Intensity \_Unit: kgOE / product-ton



• Additional Value of Energy \_Unit: Millions of Korean Won / TOE



03 | Creating Additional Value from Energy Saving

Each production site strategically targets creation of energy-saving products and production processes. The process innovation continued across the Company has reduced energy consumption significantly. Facilities have been renovated or replaced in order to furnish energy-saving and eco-friendly features, thus generating additional value for both the Company and customers.

• Energy Management Strategies

	Period	Strategies
Phase I	2001~2005	• EIF PRO campaign
Phase II	2006~2012	• Greenhouse gas management

# Response to the Convention on Climate Change

## • Terms and Targets

Period	Target
• Short Term (2005 ~ 2007)	• Completion of laying the foundation of a greenhouse gas management
• Mid Term (2008 ~ 2012)	• Advancement of a greenhouse gas management system
• Long Term (2013 ~ 2018)	• Compulsory reduction of greenhouse gas pursuant to the regulations of the Climate Change Convention

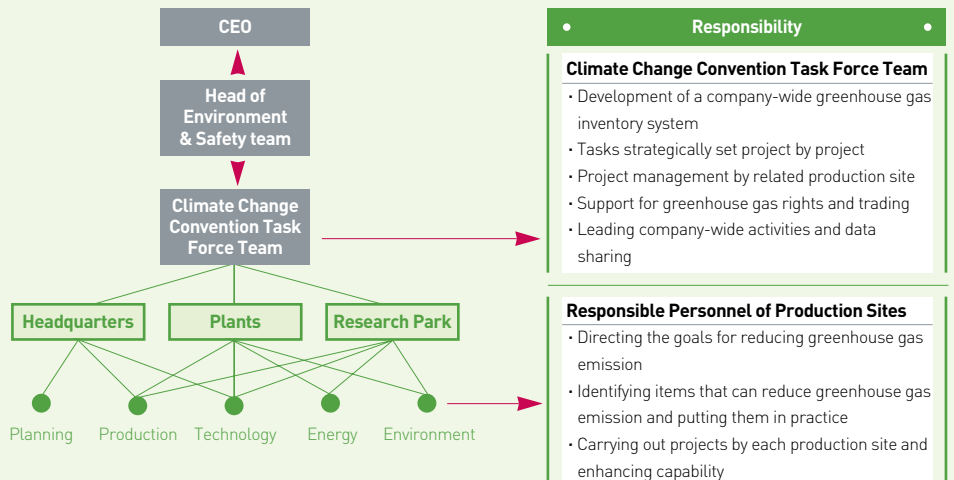
LG Chem prepares the Convention on Climate Change, which will take effect in coming years, concerning the upcoming development of environmental regulations and policies in the world. Currently, the focus of LG Chem's energy management is shifting to greenhouse gases on the basis of three strategic disciplines: The development of a greenhouse gas management system; study and application of Clean Development Mechanism (CDM) and emission credit trading; and development of energy-saving products and production processes.

In September 2005 LG Chem signed an MOU with the Korea Energy Management Corporation governing our cooperation with the "Convention on Climate Change". Under the terms of the MOU, the two parties agreed to exchange professional services, personnel, information and technology related to greenhouse gas reduction, education and training programs, and to carry out joint projects to reduce greenhouse gases. LG Chem also follows the international trends of responses to Climate Change, and we help our employees keep abreast of the latest developments through Intranet postings to our in-house bulletin boards.

## • Master Plan

Targets	Strategies	Period
• Development of Greenhouse Gas Management System	01. Development of greenhouse gas inventory system	2005
	02. Technology development for and investment in reducing greenhouse gas emission	2006
	02. Development of a greenhouse gas registry system	2006~2007
• Application of CDM and the Development of a Management System for Greenhouse Gas Emission Rights and Trading	01. Application of Clean Development Mechanism (CDM) and development of a management system for greenhouse gas emission rights and trading	2005~2008
	02. Greenhouse gas emission rights and trading managed by the related division and production site	2006~2008
	03. Expert training programs	2005~2008
• Development of Energy-saving Products and Processes	01. Research activities centered on production process technologies for the development of breakthrough energy-saving products	Continued

## • Greenhouse Gas Management



• National and International Trends of Response to the Convention on Climate Change

● **Four Development Stages for Greenhouse Gas Management**

**Company-wide Greenhouse Gas Inventory System**

- Calculation of pollutants emission index for each energy source
- Framing in-house guidelines based on statistic data
- Level of greenhouse gas emission intensity assessed by different product processes



**Project Planning and Analyzing the Reducibility of Potential Reduction of Greenhouse Gas**

- Estimating emission level of greenhouse gases
- Analyzing reducibility of potential reduction of greenhouse gases
- Compulsory allocation scenario estimation
- Marginal cost estimation and cost-reduction planning



**Greenhouse Gas Registry System**

- Development of an online-based report system to post emission level of greenhouse gases
- Development of a greenhouse gas registry system to post performance related with greenhouse gas reduction
- Development of a management system for greenhouse gas emission rights



**Integrated Greenhouse Gas Management System**

- Carrying out greenhouse gas reduction projects in stages
- Management for emission trading

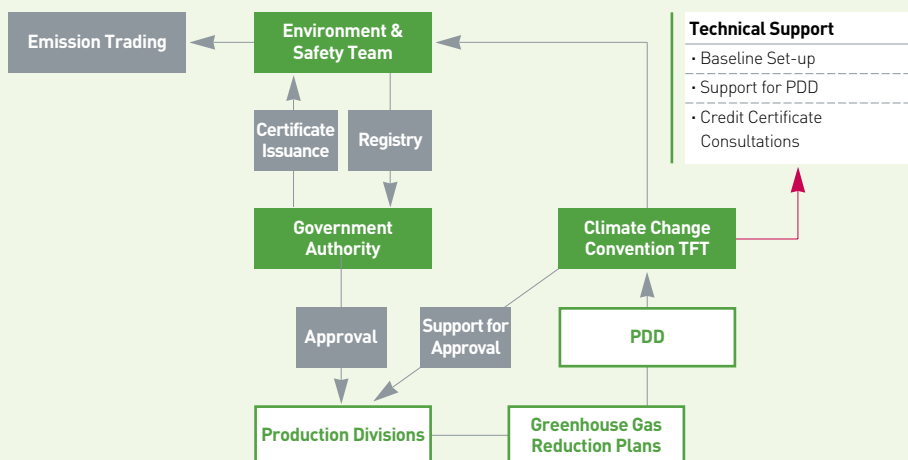
**01 | Assessment of Greenhouse Gases**

LG Chem is developing company-wide systems for systematic greenhouse management. The development is scheduled in four stages: A company-wide greenhouse gas inventory system; planning and analyzing the reducibility of potential amount of greenhouse gases; a greenhouse gas registry system; and an integrated greenhouse gas management system.

**02 | Registry System for Greenhouse Gas Reduction**

LG Chem's performance results in meeting targets for greenhouse gas reduction are prepared in the form of Project Design Documents (PDD) for each production facility. The PDDs are submitted to the Korea Energy Management Corporation, a government body appointed to monitor greenhouse gas compliance. In 2006 we expect to register 15 PDDs in total. As of July, 2005, LG Chem has already submitted 13 PDDs to the registration office.

● **Registry System for Greenhouse Gas Reduction**

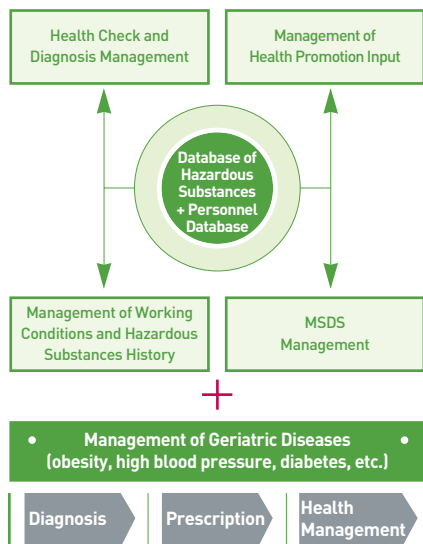


● Signing an MOV for "Cooperation to the Convention on Climate Change"



# Safety and Health

## • Health Promotion System



- LG Chem's Health Promotion System
- ● In-house Health Check-up Center (Yeosu)
- ● ● In-house Healthcare Center (Ulsan)

LG Chem has made every effort to ensure the safety and health of its employees and the community. Safety and health management has been revised to sufficiently cover a wide range of business activities from procurement, production and sales to customer services.

### 01 | Safety and Health Management System

LG Chem strives for constant improvements in its health and safety practices, including risk assessment, education and training, and emergency response. To help formalize our systems we have adopted Process Safety Management (PSM), OHSAS 18001, and KOSHA 18001. We have also combined various safety and health systems into an integrated system under the Responsible Care guidelines to ensure a higher standard of safety awareness across our organization.

### 02 | Safety Promotion for Business Partners

To promote safety as a top concern among all our business partners, we subject each potential business partner to a strict screening and even stricter qualification process. Our oversight does not end there, however. Upon becoming partners of LG Chem, we transfer technologies, provide education and equipment inspection and make periodic performance evaluations. Their results during these evaluations can determine whether a partner receives preferential standing during bids for subsequent supply contracts.

### 03 | Proactive Prevention of Accidents

To better prepare ourselves for the unexpected, LG Chem runs simulation exercises of various industrial accidents, allowing the staff directly involved to study and participate in the scenario. These drills help LG Chem and its workers to feel confident in their ability to handle threats to safety, and to work as a team in dealing with the special challenges of our industry.

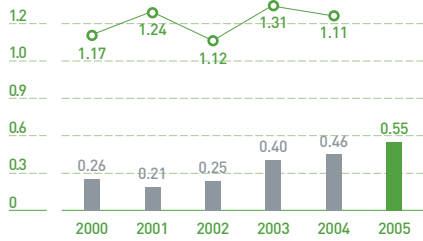
## • Prevention of Potential Risks

Stage	Implementation
<b>Figures Out Potential Risks</b> • Selects the most risky factors	• Selects the most risky factors through holding periodical meetings (each employee finds ten risky factors ) • Selects the most risky factors from the potential risky actors submitted
<b>Investigates Virtual Scenario</b> • Sets virtual scenario of accidents • Investigates accidents	• Head of each team offers the virtual scenario of accidents to the most risky factors • Each team organizes Accident Investigation Committee that consists of team members. The Committee analyzes the source of the accidents and takes measures to prevent any accident in the future
<b>Takes Preventive Measures</b> • Improves work processes on the spot • Presents mid- and long-term improvement plans to the team • Conducts improvement plans	• Improves work processes without delay • Suggests matters related to investments or other teams' cooperation • It is used as an item for risk prediction training.
<b>Conducts Risk Prevention Competition</b> • Production Teams: Once in every three months • Plants: Once in a year • Prize-giving	• Evaluation: preparation of accident report, feasibility of countermeasure and improvement results (Evaluation criteria will be developed) • Rewards: Will be determined through the discussion with Innovation Promotion Team



● Injury Rate

○ Domestic Chemical Sector ■ LG Chem

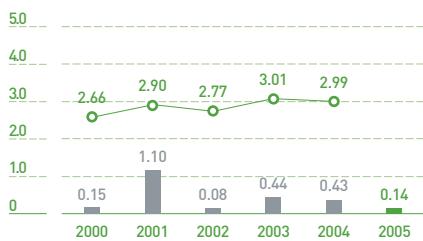


● Injury Rate =  $\frac{\text{Number of persons who sustained an accident}}{\text{Average number of workers}} \times 100$

※ The injury rate increased from off-site accidents (22% of total accidents) due to a growing number of sports and leisure activities, outdoor get-together meetings, etc.

● Severity Rate

○ Domestic Chemical Sector ■ LG Chem



● Severity Rate =  $\frac{\text{Total loss of working days}}{\text{Total annual working hours}} \times 100$



- Safety First Group Education
- Safety First Manuals

04 | Safety and Health Education

Health and safety awareness is central to all employee activities at LG Chem. Our newly-developed “Safety First Curriculum II” is a fully updated program that stresses accident prevention by systematically forecasting risk factors for any combination of plant activities.

● Safety First Course I

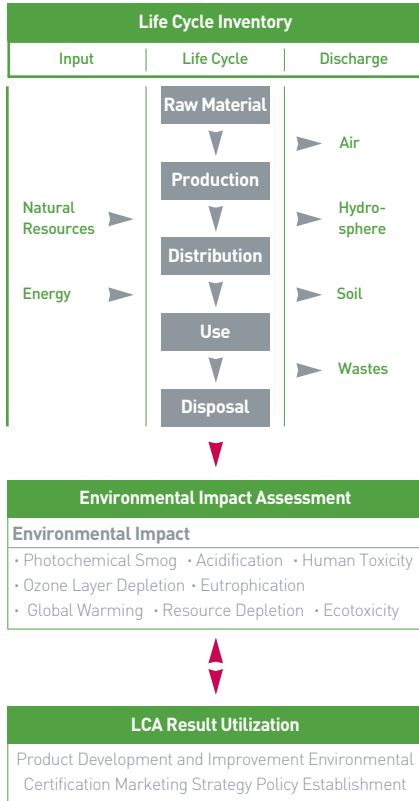
Classification	Safety Leader Courses			General Courses		
<b>Courses</b>	Level I Basics	Level II Widespread	Level III Safety Manner in Daily Practice	Level I Basic	Level II Widespread	Level III Safety Manner in Daily Practice
<b>Objectives</b>	Enhancing the importance of safety awareness by following the basics needed in workplaces and correcting unsafe practices	Pre-and-post skills needed for airtight safety company-wide	Comprehensive management to ensure safety of employees, safe operation of facilities, and safety-intensifying technologies	Ensuring airtight safety through intensifying awareness of employees with continued safety reeducation	Enhancement of safety-handling capabilities through hands-on programs	
<b>Responsibility</b>	Safety management with coaching, guidance, and support			Strict observance and practice of safety management guidelines		
<b>Curriculum</b>	<ul style="list-style-type: none"> <li>Understanding Process Safety Management (PSM)</li> <li>Procedures for safe operation</li> <li>Approval for safe working conditions</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of safety risks in processing lines</li> <li>Environment and safety checking prior to operation</li> <li>Internal audit</li> </ul>	<ul style="list-style-type: none"> <li>Hands-on studies for Process Safety Management (PSM)</li> <li>Enhancement of troubleshooting skills</li> </ul>	<ul style="list-style-type: none"> <li>Procedures for safe operation</li> <li>Approval for safe working conditions</li> </ul>	<ul style="list-style-type: none"> <li>Procedures for safe operation</li> <li>Environment and safety checking prior to operation</li> </ul>	<ul style="list-style-type: none"> <li>Procedures for safe operation</li> <li>Capability enhancement to sufficiently identify operational shortcomings</li> </ul>

● Safety First Course II

Start-up	Learning	Performance		
<b>Importance of accident prevention</b>	<b>Importance of knowledge</b>	<b>Importance of execution</b>		
<ul style="list-style-type: none"> <li>Recognizes the importance of accident prevention through the prediction of risk factors</li> <li>Leader's role and major sources of accidents</li> </ul>	<ul style="list-style-type: none"> <li>Safety criteria for preventing disaster</li> <li>Risk factors in the case of disasters or accidents</li> </ul>	<ul style="list-style-type: none"> <li>Strengthens risk management capabilities through the in-depth research of each worksite</li> <li>Improves risk factor detecting capabilities through risk prediction training programs</li> </ul>		
Motive	Learn	Performance I	Performance II	Courses
Current status of plants	Accident cases	Inspection of work processes	Risk prediction training	Preparing of execution plan
Importance of accident prevention	Prevention criteria for each type of disaster	Safety evaluation	Role play of risk prediction training	Summary
	We are still...	Analysis and execution	Analysis and execution	
	Practice cases	Sharing of evaluation results		

# Eco-Products

● LCA



LG Chem strives to make eco-products that can meet both the requirements of the EU, including RoHS that will take effect on and after July 2006. They have the toughest environmental standards in the world, and the general growing trend to embrace a healthy lifestyle. To this end, the Company continues increasing investment in pollution-free, high-performance products and the development of innovative processing technologies. The Life Cycle Assessment (LCA) introduced in 1997 allowed assessment of the potential environmental impact of a product life cycle, thus contributing to the reduction of environmental load in all products.

Today, LG Chem produces 26 kinds of eco-products labeled with an environmental mark, clarifying environment-friendly features for customers, and 17 kinds of building materials labeled with the Healthy Building Material Mark, which assures pleasant air quality and environment indoors. We will continue to focus our efforts on the development of eco-friendly technologies for construction materials.

## 01 | Life Cycle Assessment (LCA)

LG Chem introduced the LCA in 1997 as a tool to develop eco-products. The Company applies the LCA for assessing the volume of material and energy resources needed in a product lifecycle, from material procurement and production to disposal, and the potential environmental impact of the product on air, water, and soil. The range of LCA applications has been expanded into various products to improve eco-friendly features through minimizing environmental impact.

Since 2000, LG Chem has participated in the national LCA standardization database project, a joint research carried out with the Ministry of Commerce, Industry and Energy and the Ministry of Environment. The Company has secured Life Cycle Inventory (LCI) regarding 15 kinds of synthetic resin products including poly vinyl chloride (PVC). In 2005, the LCI was framed for 14 kinds of raw materials, including artificial marble, one resin coated copper foil (RCC) model and two copper clad laminate (CCL) models and plasticizer, all of which provided references for publishing the Environmental Report on Products 2005. In addition, the environmental impact assessment was performed on all products to identify shortcomings throughout their life cycles. The report will feed data for the Environmental Declaration of Products (EDP) certificate and meet the customers' growing demands for environmental information on the Company's products.

● Development of Eco-Products

Consideration of Life Cycle of Products	Environmental Assessment / Cost Analysis and Quantification	Evaluation of Product's Competitiveness	Environmental Improvement of Products	Publicity of Product Environmentalty
Raw Materials Production	• Natural resources	• Life Cycle Assessment (LCA)	• Recycling rate	• Eco-label
Product Production	• Materials discharged into air • Materials discharged into water system		• Prohibition/Reduction of restricted materials	• Eco-declaration
Distribution	• Wastes	• Eco-efficiency analysis		
Use	• Life cycle cost		• Minimization of environmental impact	• Environmental declaration of products
Recycling / Disposal	• Environmental restrictions	• Eco-indicator		



- Eco-Label
- Healthy Building (HB) Material Mark





● National and International Trends of Regulation on Eco-products



● Z:IN L.GRECO  
 ●● Z:IN MOZEL PROPOSE  
 ●●● Z:IN MOZEL *Fiancee*

## 02 | Eco-Products

“Z:IN HI-Macs” is a high-grade interior finishing product made of artificial marble. It is widely applicable to kitchen surfaces, work tables and vanities. With an ever-expanding pallet of colors and pattern styles to choose from, Z:IN HI-Macs surfaces beautifully complement all styles of interior design. It features a non-porous surface that is easily cleaned and completely renewable, making it ideal for both home and commercial applications. Z:IN HI-Macs is thermoformable, and so can be shaped to fit any design you can imagine.

It is also an eco-friendly product, with low contents of formaldehyde and Volatile Organic Compounds (VOCs). Z:IN HI-Macs Monochrome VOC content stands at 0.016mg/m<sup>3</sup>h and HI-Macs Granite measures 0.011mg/m<sup>3</sup>h. The formaldehyde content in Monochrome is 0.010mg/m<sup>3</sup>h, and in Granite is 0.011mg/m<sup>3</sup>h. All these figures are below the industry average for this type of product. Z:IN HI-Macs is a hygienic material that prevents any damage from germs, bacteria and mold. It has secured health certificates from the NSF of the US and LGA of Germany. It also acquired the Sanitary Finished Mark for anti-bacterials imitation stone from the Korea Consuming Science Research Center.

“Z:IN L.GRECO” is a premium wallpaper that expresses the unique qualities of Greek interior design. In recognition of this product’s beautiful aesthetic and functionality, it too was awarded the top-ranked HB Material Mark.

“Z:IN MOZEL PROPOSE” is an artistic, decorative wallpaper that leads current interior design trends with attractive colors and patterns. Z:IN MOZEL PROPOSE has also acquired the top HB Material Mark rating.

“Z:IN MOZEL *Fiancee*” is a wallpaper combining the traditional strengths of general wallpaper with unique elements of embossing. In recognition of its unique design, Z:IN MOZEL *Fiancee* was also awarded with the highest HB Material Mark rating.



“Z:IN HAUT” is a window frame product line. Compounded with PVC and wood, it help reduces the cost of indoor cooling and heating by more than 30% compared with conventional aluminum window frames. It acquired the High Efficiency Tools and Materials Mark certified by the Korea Energy Management Corporation and the Eco-Label by the Korea Eco-Labeling Association. Customer appreciation of its high heat insulation and soundproofing property was demonstrated when consumers voted Z:IN HAUT the Best Wellbeing Product in the Consumer Wellbeing Index 2004 among customized windows frame products. The customized Z:IN HAUT is the first in Korea providing a special function for collecting dewdrops formed on windows due to the difference in interior and exterior temperatures and discharging the dewdrops through the separate groove made on the bottom frame. The tilting system allows natural air ventilation without sudden change of temperature.

“Z:IN VIP TILE” is an eco-friendly premium tile that reproduces the appearance of non-directional, natural marble. It has a structure unique among Korean products, and features high durability and outstanding walking comfort. Z:IN VIP TILE acquired the highest HB Material Mark ranking for reducing indoor pollutants through use of eco-friendly manufacturing materials.

“Z:IN GALLANT TILE” is an eco-friendly product line that gives more vibrant interior design effects through use of three base colors. With front-and-back marble surfaces, it is highly durable and has also acquired the highest-ranked HB Material Mark.

“Z:IN VIP CONDUCTIVE TILE” is an eco-friendly and high-functional line of tile products. It prevents buildup of static charges through use of embedded conductive materials, making it suitable for use in semiconductor plants, IT manufacturing facilities, surgical suites and intelligent buildings, or anywhere that standing charges present a hazard to sensitive equipment.

“Z:IN DECO TILE NEW FINE” is a printed tile developed especially for application in public-sector institutions where eco-friendly interior finishing materials are mandated.



- Z:IN GALLANT TILE
- Z:IN DECO TILE NEW FINE

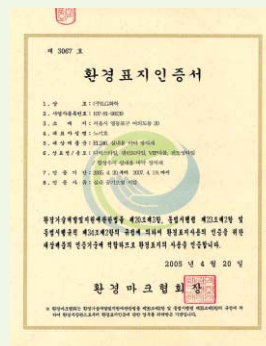
### 03 | Eco-Products

#### • Eco-Label Certified (26 kinds)

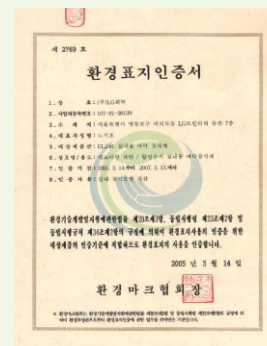
Z:IN DELUXE TILE, Z:IN GALLANT TILE, Z:IN VIP MARBLE TILE, Z:IN VIP CONDUCTIVE TILE, Z:IN REXCOURT, Z:IN EQ FLOOR, Z:IN DECO TILE NEW FINE, Z:IN HAUT PST70, Z:IN HAUT PTT70, Z:IN HAUT PLS160/PLS170/PLS170S, Z:IN Benif, Z:IN Nutrex, etc.

#### • HB Material Mark Certified (17 kinds)

Z:IN MOZEL PROPOSE, Z:IN MOZEL *Fiancee*, Z:IN L.GRECO, Z:IN MOZEL GRACIA, Z:IN HI-Macs, Z:IN NUTREX, Z:IN Benif, etc.



• Z:IN GALLANT TILE



• Z:IN DECO TILE NEW FINE



• Z:IN L.GRECO



• Z:IN MOZEL PROPOSE



• Z:IN MOZEL *Fiancee*





“

# Nature embodies all living things

”

All our lives are part of Nature's continuous Life.

In Nature there are no borders, and all living things belong equally.

Trees, the lungs of the world, breathe oxygen into the atmosphere.

Other lives in turn breathe in the oxygen,

and life in is harmony.

LG Chem is shaping a better world where people live more closely in tune with Nature.





# 03

## Partnership with Interested Parties

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Partnership with Interested Parties

Outreach Program	Environment and Safety Certifications	Environment and Safety Awards	Environmental Preservation Activities	Volunteer Activities for the Community
47	48	49	50	51



## Outreach Program



- Mobile Chemistry Lab
- ● Chemistry Camp
- ● ● Award Ceremony of Chemistry Frontier Festival (2005)
- ● ● ● Leaflets for the Chemistry Frontier Festival

LG Chem has carried out outreach programs as part of social contribution activities. Intended to boost a friendly image in public perception of the chemical industry, many of the programs and events are specifically aimed at raising interest in chemistry among young people.

Outreach programs were prepared by professionals who incorporated approaches gleaned from comparative studies of successful cases in other countries. They include Mobile Chemistry Lab as a hands-on program for elementary students, Chemistry Camp for middle school students, and Chemistry Frontier Festival for high school students, all designed to cultivate talent in science and engineering.

### 01 | Mobile Chemistry Lab

“It promotes interest in children's minds while on the go.”

The Mobile Chemistry Lab is a specially-renovated, cutting-edge vehicle for experiments and experiences in chemistry. It visits elementary schools and orphanages weekly, providing children with hands-on programs and knowledge of chemicals in easy-to-learn and intriguing ways. With the support of the Korea Science Foundation, it is jointly operated with the Science and Technology Promotion Center for Youths at Hanyang University.

### 02 | Chemistry Camp

“Students find much fun in the great outdoors.”

Chemistry Camp, themed on ‘Smashing Time with Friends at LG Chem Camp,’ is 3-day program during summer vacation for middle school students every year. Professionals in chemical science or recreation add spice to chemical programs and group activities.

Thus, students enjoy a taste of Chemistry in the great outdoors and have memories that will remain fresh in the years to come.

### 03 | Chemistry Frontier Festival

“Learn all you need to know about chemical science.”

The Chemistry Frontier Festival ([www.ilovechem.com](http://www.ilovechem.com)) is designed to cultivate creativity in high school students talented in chemical science and life science. It is organized by Korea Advanced Institute of Science and Technology (KAIST) and co-hosted by the Ministry of Education and Human Resources Development, LG Chem, Hanwha Chemical, SK Corporation, Honam Petrochemical, and Samsung Total. Contestants selected in a preliminary contest compete in feats of knowledge and creativity dealing with assigned subjects (environment, energy, life science, sociology, traditional Korean science) or free subjects, with results announced in a presentation and on posters. At the same time, a Q&A Forum is held for likeminded high school students, with issues mainly focused on the future of chemical science, and with professors of KAIST and researchers as panels. The festival accompanies various events, including a product show displaying up-to-date products of the co-hosts, visits to cutting-edge research labs, award ceremony, and a dinner reception.

# Environment and Safety Certifications



- Environmentally Friendly Company Logo
- Certificate for the Designation of an Environmentally Friendly Company
- ● ● ISO 14001
- ● ● ● OHSAS 18001
- ● ● ● ● KOSHA 18001

LG Chem has heightened the standards of environment-related performance through continued repositioning of its Environment, Health, and Safety (EHS) management. This is apparent in each of worksites that has acquired the ISO 14001, a certificate qualifying environmental management, (the) OHSAS 18001, and (the) KOSHA 18001, a certificate for health and safety management. Internal and external audits periodically review the Company's status as to practices specified in the certificates. The Company was designated an Environmentally Friendly Company by the Ministry of Environment. LG Chem's the Research Park (Daejeon) acquired an ISO 14001 in September 2005. This is a certificate qualifying the Center's environmental management systems. Our Daesan Plant also received the same certificate in May 2006. We will make concerted efforts to operate and maintain environment and safety management systems in a systematic manner by introducing them into all of our domestic and overseas worksites.

### ● Environment and Safety Certifications

Worksite	Type of Certification	Certifying / Designating Org.	Date of Acquisition
Yeosu Plant	ISO 14001	DNV	Dec. 1996
	OHSAS 18001	DNV	Dec. 2000
	Environmentally Friendly Company	Ministry of Environment	Dec. 1995
Cheongju Plant	ISO 14001	DNV	Nov. 1999
	OHSAS 18001	DNV	Dec. 1999
	Environmentally Friendly Company	Ministry of Environment	Dec. 1995
Ochang Techno Park	ISO 14001	DNV	Nov. 2004
	OHSAS 18001	DNV	Nov. 2004
Ulsan Plant	ISO 14001	KSA	Dec. 1996
	KOSHA 18001	KOSHA	Nov. 2000
	Environmentally Friendly Company	Ministry of Environment	Dec. 1995
Onsan Plant	ISO 14001	KfQ	Oct. 1996
	KOSHA 18001	KOSHA	Oct. 2004
	Environmentally Friendly Company	Ministry of Environment	Feb. 2000
Naju Plant	ISO 14001	DNV	Jul. 1997
	KOSHA 18001	KOSHA	Sep. 2000
	Environmentally Friendly Company	Ministry of Environment	Apr. 1998
Iksan Plant	ISO 14001	DNV	Dec. 2004
	KOSHA 18001	KOSHA	Nov. 2001
	Environmentally Friendly Company	Ministry of Environment	May 1996
Daesan Plant	ISO 14001	LRQA	May 2006
Research Park	ISO 14001	KfQ	Sep. 2005

\*KOSHA: Korea Occupational Safety & Health Agency  
 KSA: Korean Standards Association  
 KfQ: Korean Foundation for Quality  
 \*\*Ochang TP is preparing for Environmentally Friendly Company Certification

# Environment and Safety Awards

LG Chem's systematic operation and faithful practices in compliance with the standards of environment, and safety certificates have been highly appreciated by the public and received many awards.

### ● Environment and Safety Awards

Date	Awardee	Award	Awarder
Nov. 1999	Ulsan Plant	Excellent Green Energy Company Award	Korea Federation for Environmental Movement, etc.
Nov. 1999	Cheongju Plant	Environmental Technology Award	Ministry of Environment
Nov. 2000	Cheongju Plant	President Award for Excellent Environmental Management	Ministry of Commerce, Industry and Energy
Nov. 2000	Yeosu Plant	President Award at the Convention for Electric Safety Promotion	Ministry of Commerce, Industry and Energy
Dec. 2000	Naju Plant	Award for Outstanding Social Volunteer Work	Naju City
Dec. 2000	Ulsan Plant	Excellence Award for Environmental Management	Ulsan Metropolitan City
Jun. 2001	Cheongju Plant	Gold Medal at the Cheongju City Environmental Awards	Cheongju City
Nov. 2001	Ulsan Plant	Gold Medal at the Convention of Excellent Environmental Management Practiced Cases	Korean Association of Environmentally Friendly Companies
Jun. 2002	Cheongju Plant	President Award for Environment Preservation Merit	Ministry of Environment
Oct. 2002	Cheongju Plant	Prime Minister Award at the Convention for Electric Safety Promotion	Ministry of Commerce, Industry and Energy
Nov. 2002	Ulsan Plant	President Award at the National Quality Unit Contest	Ministry of Commerce, Industry and Energy
Jul. 2003	Yeosu Plant	Best Company Award for Labor-Management Cooperation in Prevention of Industrial Accidents	Ministry of Labor
Jul. 2003	Yeosu Plant	Grand Prize for the Honorary Industrial Safety Supervisor Case	Ministry of Labor
Jul. 2003	Ulsan Plant	Excellence Award at the Quality Unit Contest of Ulsan Metropolitan City	Ulsan Metropolitan City
Oct. 2003	Cheongju Plant	Award received for 4 consecutive years for Excellent Energy-Saving Practices in Compliance with the VA	Ministry of Commerce, Industry and Energy
Nov. 2003	Cheongju Plant	Grand Prize at the Convention of Excellent Environmental Management Practiced Cases	Ministry of Environment
Nov. 2003	Ulsan Plant	President Award at the National Quality Unit Contest	Ministry of Commerce, Industry and Energy
Jun. 2004	Cheongju Plant	Grand Prize in the Field of Chemical Engineering for Environmental Management	Ministry of Environment
Jul. 2004	Cheongju Plant	Award for Excellent Operation of Chimney Telemetering System	Ministry of Environment
Oct. 2004	Cheongju Plant	Award for Excellent Energy-Saving Practices in Compliance with the VA	Ministry of Commerce, Industry and Energy
Nov. 2004	LG Chem	Excellence Award in the Chemical Sector at the Environmental Report Publishing Company Awards	Korea Green Foundation
Nov. 2005	Ulsan Plant	Excellent Product Quality Company Award	Ministry of Commerce, Industry and Energy
Dec. 2005	Ulsan Plant	Excellent Company Award for 'One Mountain, One River Cleanup' Campaign	Ulsan Metropolitan City
Dec. 2005	Naju Plant	Korea Safety Award	National Emergency Management Agency



- Korea Safety Award
- Grand Prize in the Field of Chemical Engineering for Environmental Management
- Excellent Company Award for 'One Mountain, One River Cleanup' Campaign



# Environmental Preservation Activities

## 01 | Ecology Protection

In 1997, LG Chem established the LG Evergreen Foundation for the purpose of balanced development and efficient use of land, along with protection of wildlife, mountain forestation, opening of wildlife observation paths, a campaign for improving Korean burial customs, and other activities based on environmental preservation. LG Chem reaches out hands to help shape a better world where people and nature can thrive together in harmony.

## 02 | Community Environment Protection

LG Chem volunteers activities for the protection of nature and the community as part of its commitment to help preserve a clean and green environment. Keeping this in mind, each establishment carries on various campaigns including 'One Mountain, One River Cleanup,' 'Migratory Birds Feeding,' 'Extermination of Negative Foreign Fishes,' and 'Tree Planting' campaigns and puts them in practice.

## 03 | Green Landscape

Each worksite at LG Chem landscapes an ecological garden. As a way to perceive environmental changes and to clean up air pollutants through natural means, the ecological garden is planted with various trees and flowers, both sensitive to and resistant to air pollution. For instance, Cheongju and Ulsan Plants are the showcases. The ecological garden serves as an environmental indicator, and, at the same time, offers reposeful moments for employees and visitors. In addition, each production site is broadening green patches in its compound to create a more pleasant working environment, while monitoring the status of air pollution in the neighboring community. When an abnormal level of air pollutants is detected, prompt treatment and survey take place in the area.



- A Gala Occasion Held by the LG Evergreen Foundation (Ulsan, Onsan)
- ● Community Environment Preservation Campaign (Ulsan)
- ● ● The Ecological Garden Serving as an Environmental Indicator (Cheongju)

● Ecological Park (Ulsan)

# Volunteer Activities for the Community



- Environment-Caring Experiences (Ulsan)
- ● Environmental Education Class (Cheongju)
- ● ● Volunteer Works for the Community (Iksan)
- ● ● ● Opening of Environmental Performances to the Public

## 01 | Environmental Education Center

LG Chem operates regional Environmental Education Centers offering hands-on environmental facilities and environmental programs to encourage regional children and grownups to join in environmental preservation and eco-friendly experiences.

## 02 | Eco-Industrial Park Trial Project

LG Chem has participated in the Eco-Industrial Park Trial Project led by the Management Corporation for the Cheongju Industrial Complex and supported by the Ministry of Commerce, Industry and Energy. The project aims to lay an eco-friendly industrial network through resources recycling with contaminated materials, byproducts, and waste heat generated from the Cheongju Industrial Complex, providing recycled resources as feedstock to downstream industries.

## 03 | Technical Support for Partners and Small Companies

LG Chem provides environment-related technical support for partner companies to enhance their capabilities to deal with environmental issues and management. On the basis of win-win partnership, the Company carries out regular assessment of their practices regarding the environment. Environmental management know-how, eco-friendly technologies and production processes, and post-management skills are offered to the community's small companies to help build their competitiveness in environmental management.

## 04 | Coordination with Community NGOs

LG Chem's environmental commitment goes to various nature-saving activities in coordination with non-government organizations (NGOs) active in the community. NGOs include the Environmental Association of Yeosu Industrial Complex, Association for Beautiful Yeosu 21 Promotion, Environmental Sustainability Association of Cheongju Industrial Complex, and Association for Green Cheongju 21 Promotion.

## 05 | Volunteer Work for the Community

All worksites at LG Chem have formed social volunteer teams that practice their social commitment through diverse activities. They reach out helping hands by providing financial support to home-alone senior citizens, teenage households, the disabled, and others in need. The Women Employees' Association, formed in each worksite at LG Chem, has operated an annual One-day Teahouse with profits going to welfare facilities.

## 06 | Environmental Performance Open to the Public

In an effort to build trust in the public and interested parties, LG Chem has released information on its environmental performance in the annual Responsible Care Report. The report is printed in Korean, English, and Chinese and circulated online and off.



# Glossary

## Clean Development Mechanism (CDM)

The CDM is adopted pursuant to Article 12 of the Kyoto Protocol, and is a system that allows industrialized countries with greenhouse gas reduction commitments to avoid costly investments in domestic facilities by subsidizing greenhouse gas-reducing technologies in less developed countries. In theory, the CDM should allow for at least equivalent reductions in global greenhouse gas emissions for substantially less money than would be spent by each country acting alone. Also, the CDM has the added benefit of facilitating transfer of technology, know-how and financing from advanced countries to developing ones.

## Environmentally Friendly Company

Environmentally Friendly Companies are designated by the Korean Ministry of Environment in recognition of their great contribution to environmental improvement through reduction of pollutants, resource and energy usage, promotion of eco-products and execution of environmental protection activities.

## Eco-Label

Eco-label is a symbol on a product or its package informing customers how the product was made in an environmentally sensitive manner. The eco-label aims to promote products with a reduced environmental impact from production, distribution and use, to disposal.

## Global Reporting Initiative (GRI)

The Global Reporting Initiative (GRI) was founded in 1997 by the United Nations Environment Programme (UNEP) and the Center for Agricultural, Resource and Environmental Systems (CARES). GRI is a multi-stakeholder process and an independent institution whose mission is to develop and disseminate globally applicable Sustainability Reporting Guidelines, mainly for business enterprises.

## Healthy Building (HB) Material Mark

The HB Material Mark employed in the architectural community is certified in 5 grades according to the emission level of VOCs and formaldehyde in building materials (veneer boards, flooring materials, wallpapers, wood, panels, paints, adhesives, etc) produced at home and abroad.

## ISO 14001

### (International Organization for Standardization)

The ISO 14001 is an international standard for environmental management established by the International Organization for Standardization.

## KOSHA 18001

### (Korea Occupational Safety & Health Agency)

The KOSHA 18001 is a self-regulated safety and health system authenticated by the Korea Occupational Safety & Health Agency.

## Leak Detection and Repair (LDAR) System

Causing a drop in system pressure, leaks can significantly increase cost of operation and energy consumption. The LDAR system detects the leakage, allowing the cost reduction and air-tight management.

## Life Cycle Assessment (LCA)

The LCA allows assessment of the volume of material and energy resources needed in a product lifecycle and the potential environmental impact of the product on air, water, and soil.

## OHSAS 18001

### (Occupational Health & Safety Assessment Series)

The OHSAS 18001 is an international standard that requires enterprises to practice health and safety management in order to prevent any industrial disasters, and remove potential risk factors.

## Process Safety Management (PSM)

The standards of PSM are intended to prevent or minimize the consequences of a catastrophic release of toxic, reactive, flammable or explosive highly hazardous chemicals (HHCs) that could occur in facilities where large quantities of these chemicals are stored or used.

## Regenerative Thermal Oxidizer (RTO)

The RTO oxidizes VOCs and exhaust gases in high heat (800 °C). It incorporates specialized ceramic media in a wide regenerator (heat transfer bed) to allow thermal rate efficiencies in excess of up to 97%, making it a high energy-saving and cost effective solution for air pollution control.

## Responsible Care (RC)

Responsible Care (RC) is an international volunteer movement of chemical companies to facilitate sustainable development of people and nature with strict management of toxic materials used for chemical production, thus ensuring the safety and health of both the environment and people.

## 6 Sigma

The 6 Sigma is a series of corporate management strategies that are designed to increase product innovation and customer satisfaction through maintaining a 6σ (Poor Quality Ratio: 3.4 units out of 1 million products) level of product quality.

## Sustainability Report

Currently, many business enterprises use the framework of a Sustainability Report to publish their environmental reports. The Sustainability Report presents a holistic picture of company activities and provides a balanced view of benefits and trade-offs among social, economic and environmental impacts.

## Sustainability Management

Business enterprises should practice responsible management of their economic, environmental, and social aspects. The bringing of sound sustainability in nature and people into harmony with business activities is becoming a common denominator among business enterprises.

## Tele-Monitoring System (TMS)

Under the Clean Air Conservation Act of Korea, the TMS has been installed on chimneys and other pollution outlets in production facilities. It automatically measures the pollutant emission level and the real-time data is transmitted to the TMS Control Center of the Environmental Management Corporation. Upon receiving the data, relevant government offices draw up atmospheric policies or levy environmental fines to the responsible facilities.

## Toxics Release Inventory (TRI)

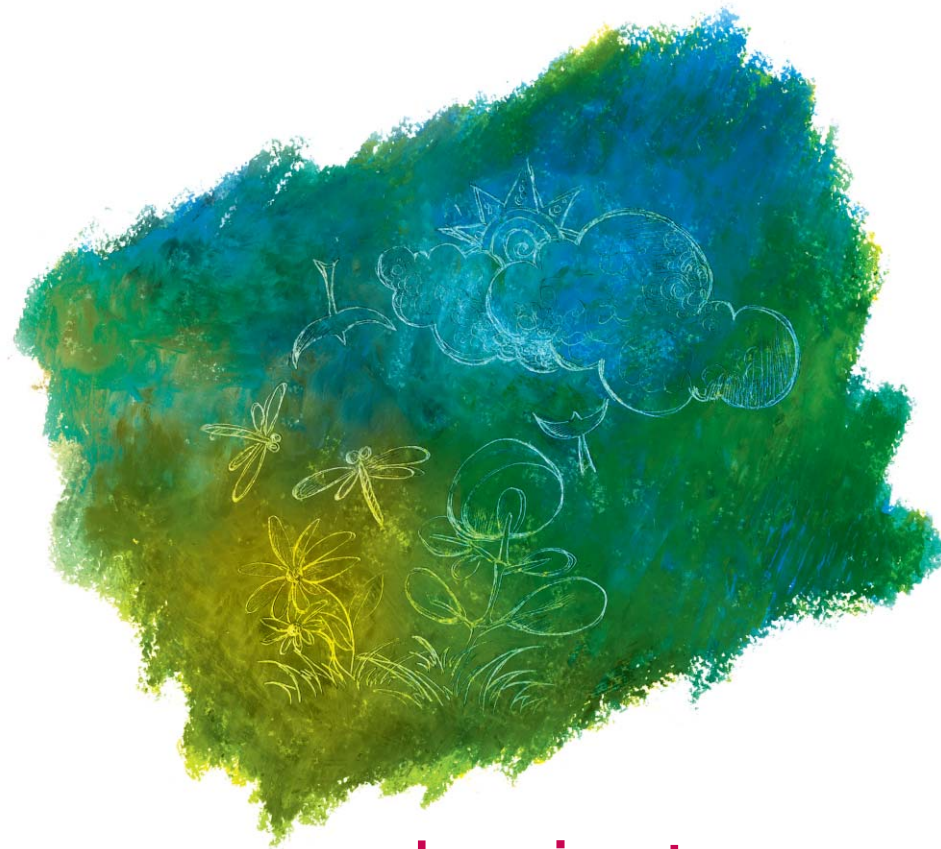
The TRI contains information concerning wastes management activities and the release of over 600 toxic chemicals by facilities, production, distribution, or other use of such materials. The relevant government office integrates the TRI data of business enterprises and releases the information to the public.

## United Nations Framework Convention on Climate Change (UNFCCC)

To prevent adverse effects of climate change, many countries have entered the UNFCCC (Korea, 1993) for the observation of regulations of global warming greenhouse gases, which include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, PFCs, HFCs, and SF<sub>6</sub>.

## Voluntary Agreement (VA)

Business enterprises of Korea voluntarily ratify the agreement with the Ministry of Commerce, Industry and Energy, for reducing the emission of greenhouse gases and maximizing the use of energy resources.



# drawing tomorrow

LG Chem 2006 RC Report | Environmental Report





# Facsimile Questionnaire upon the LG Chem 2006 RC Report

LG Chem has published the 2006 RC Report since 2003 to inform the public about our environment, safety, health, and energy management. This report will be further upgraded upon your valuable input and answers on this questionnaire.

### Recipient

Fax | 82-2-3773-7215

Environment & Safety Team, LG Chem

### Sender

- Name
- Gender
- Occupation

#### 01 | For what purpose do you use this report?

- To know the overall environmental and safety management and performances of LG Chem
- To know the environmental activities and the improved results of each production site in the community it operates
- To provide the information of this report to LG Chem customers
- Other

#### 02 | How do you find understanding this report?

- Easy
- General
- Difficult

#### 03 | In which area(s) are you interested in this report? (Mark one or more)

- Introduction
- Environmental Management
  - Environmental Management Vision and Strategies
  - Environmental Management System (EMS)
  - Environmental Accounting (EA) /
  - Environmental Performance Evaluation (EPE)
  - Emergency Response System
- Environmental Impact and
  - Environmental Performances
  - Energy / Response to the Convention on Climate Change
  - Safety and Health
  - Eco-Products
- Partnership with Interested Parties
  - Outreach Program
  - Environment and Safety Certifications
  - Environment and Safety Awards
  - Environmental Preservation Activities
  - Volunteer Activities for the Community

#### 04 | In which area(s) do you find it to be improved? (Mark one or more)

- Introduction
- Environmental Management
  - Environmental Management Vision and Strategies
  - Environmental Management System (EMS)
  - Environmental Accounting (EA) /
  - Environmental Performance Evaluation (EPE)
  - Emergency Response System
- Environmental Impact and Performances
  - Environmental Performances
  - Energy /Response to the Convention on Climate Change
  - Safety and Health
  - Eco-Products
- Partnership with Interested Parties
  - Outreach Program
  - Environment and Safety Certifications
  - Environment and Safety Awards
  - Environmental Preservation Activities
  - Volunteer Activities for the Community

#### 05 | If you think there are some areas to be improved in this 2006 RC Report, please state your opinion below.

#### 06 | If you have any input regarding this 2006 RC Report, please write your comments below.

\* If you wish to receive the next edition of this RC Report, please complete the information below.

Address \_\_\_\_\_

Tel \_\_\_\_\_

Fax \_\_\_\_\_

e-mail \_\_\_\_\_



# COMPANY HISTORY

- 1947. 01. Lucky Chemical Industrial Corporation established (cosmetics production launched)
- 1951. 11. Headquarters moved to Bujeon-dong, Busanjin-gu, Busan Metropolitan City  
(Produced Korea's first injection-molded synthetic resin products)
- 1954. 06. Construction of Busan Yeonji Plant completed (synthetic resin processing lines expanded)
- 1959. 03. Lucky Fats and Oils Industries Co., Ltd., established
  
- 1962. 08. Lucky Vinyl Co., Ltd., established
- 1966. 01. Company name changed to Lucky Chemical Industries Co., Ltd.
- 1966. 03. Produced Korea's first synthetic detergent
- 1969. 10. Company went public
- 1974. 02. Company name changed to Lucky, Ltd.
- 1976. 11. Construction of Yeosu PVC Paste Resin Plant completed
- 1978. 08. Construction of Ulsan Plastic Processing Plant completed
- 1979. 12. Lucky Central R&D Center in Daejeon opened
  
- 1984. 03. Naju Plant of Korea Chemical Co., Ltd., acquired
- 1992. 10. Construction of Yeosu Phthalic Anhydride Plant completed
- 1993. 04. HCFC Resistant Resin developed and commercialized first in the world
- 1994. 10. 1st phase construction of LG Chem Research Park completed
- 1995. 02. Company name changed to LG Chemical, Ltd.
- 1996. 11. India's Hindustan Polymer, Ltd., acquired
- 1997. 12. Selected as Asia's Best Company by Euromoney, UK's economy magazine
- 1998. 05. Tianjin LG Dagu Chemical PVC Plant, China, completed  
Tianjin LG New Building Materials Flooring Plant, China, completed
  
- 1998. 07. Ningbo LG-Yongxing Chemical ABS Plant, China, completed
- 1999. 02. 2million negotiable DRs issued (first among listed companies in Korea)
- 1999. 10. Production facilities for information and electronic materials (lithium ion batteries, optical materials, CCL for MBLs, etc.) completed; Color filter photoresists for LCDs successfully commercialized
  
- 2000. 07. Phosphor for PDP developed
- 2000. 10. Ningbo LG-Yongxing Chemical ABS Plant, China, expanded (90,000 M/T)
- 2000. 11. Hyundai Petrochemical's PVC Business acquired
  
- 2001. 03. Compact Power Inc., a U.S. -based battery research center, established
- 2001. 04. Company demerged into LG Chem Investment, LG Chem, and LG Household & Healthcare
- 2001. 10. Production facilities in LG-Dagu Chemical PVC Plant, China, expanded
  
- 2002. 04. Production capacity of rechargeable batteries at Cheongju Plant doubled with an investment of KRW100 billion
  
- 2003. 03. Construction of Window Frame production facility in China completed
- 2003. 06. Hyundai Petrochemical acquired in consortium with Honam Petrochemical
- 2003. 08. LG Chem (Nanjing) Information & Electronic Materials Co., Ltd., China, established
- 2003. 11. LG Chem Industrial Materials Inc. (LG CIM), Georgia, USA, established
  
- 2004. 03. Ochang Techno Park established
- 2004. 06. LG-Yongxing Latex established in Ningbo, China
- 2004. 07. LG Chem (Taiwan), Ltd., established
- 2004. 12. LG Chem China Investment Co., Ltd., established
  
- 2005. 07. Yeosu Acrylate facilities extended (95,000 M/T)
- 2005. 11. Merger with LG Daesan Petrochemicals approved
- 2005. 11. LG Chem established in Poland to produce polarizer
- 2005. 12. Ochang Polarizer Plant extended (26 million m<sup>2</sup>)

## Contact Information

For more inquiries or any opinion about the LG Chem 2006 RC Report, feel free to call, mail, or e-mail us at the addresses below.  
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 The LG Chem 2006 RC Report can be downloaded from: [www.lgchem.com](http://www.lgchem.com).

Contents of the 2006 RC Report are based on LG Chem's performances as of December 31, 2005.  
 They are subject to change without prior notice.





**LG Chem**

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