

**Solution***Partner*

**2011**

LG CHEM  
SUSTAINABILITY  
REPORT

LG Chem delivers innovative materials and solutions for people to achieve **sustainable happiness**.

LG Chem relentlessly seeks technology development and innovation so as to lead the future. LG Chem conducts green management, establishes a creative corporate culture and pursues shared growth with business partners and local communities in order to make **a better tomorrow**.

We hope that everyone will face a bright hope in a better world that we make together with stakeholders.



## ABOUT THIS REPORT

2011 Sustainability Report, which is the sixth sustainability report published by LG Chem, has been prepared based on the results of the materiality test conducted as a significant communication channel with stakeholders in accordance with the Global Reporting Initiative (GRI) guidelines. This report summarizes the efforts and results that LG Chem achieved in carrying out sustainability management in the economic, environmental and social sectors during the year 2011. LG Chem will continue to provide stakeholders with information in a transparent and meaningful manner so as to become a company that grows together with stakeholders.

### • Reporting Period and Scope

This report mainly covers the period from January 1, 2011 to December 31, 2011. However, we also included performance afterwards for some matters of significance and used four-year data starting from 2008 to show the trends of quantitative performance. In terms of scope, the report focuses on sustainability management performances of LG Chem in Korea, including our head office in Seoul, Research Park in Daejeon and eight plants in Yeosu, Cheongju, Ochang, Ulsan, Gimcheon, Naju, Iksan and Daesan. Major achievements made by Chinese subsidiaries in Nanjing, Yongxing, Dagou, Gwangzhou and Bohai are also addressed in this report.

### • Recent Publication

LG Chem has been issuing a sustainability report every year since 2007. Given the diverse stakeholders, this report, available in Korean, English and Chinese, can also be viewed from our website at <http://lgchem.com>. The last report published most recently is '2010 Sustainability Report' in April 2011.

### • Reporting Criteria and Verification

This report is aligned with the G3.1 guidelines of the Global Reporting Initiative (GRI). It also reflects ISO 26000 Core Subjects, DJSI and EICC Checklists. The third-party verification was conducted by Korea Productivity Center, an assurance provider licensed by AccountAbility, the author of AA1000 standards. The independent verification has helped improve the reliability of reporting contents so that stakeholders are able to understand LG Chem's sustainability management more accurately. The details of the verification can be found in the section entitled INDEPENDENT ASSURANCE STATEMENT (pages 94-95).

### • Key Features

2011 Sustainability Report has made meaningful progress in terms of structure and contents compared to the previous report. In the materiality test process, significant issues have been identified based on opinions of a task force composed of diverse stakeholders, executives and employees, and expert opinions have been also incorporated in this report to deliver sustainability management performance in a more effective manner. We extended the scope of reporting to include two more Chinese subsidiaries (Gwangzhou, Bohai) in this report in addition to the three subsidiaries (Nanjing, Yongxing, Dagou) from the previous report in order to address our various performances in a more inclusive way.

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# LG CHEM

## SUSTAINABILITY

### REPORT



FOCUS ISSUE 1 GHG - Energy Management System



FOCUS ISSUE 2 Loss Control Guideline



FOCUS ISSUE 3 Advance into the European Energy Storage System Market



FOCUS ISSUE 4 LG Chem Chemistry Camp for the Dream of Youth

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**LG Chem will stay committed to growing into a global chemical company that plays the role of 'Solution Partner'.**

## CEO MESSAGE

Dear Stakeholders,

Last year, LG Chem recorded the sales of KRW 22.676 trillion, which is 16% up on the previous year, and a higher operating income of KRW 2.835 trillion year on year on a consolidated basis. This continued growth is the result of our drive for 'Speed Management' based on clear vision and strong execution power of employees amid the challenging business environment, and it would not have been possible without the support and encouragement of our stakeholders. I would like to take this opportunity to extend my sincere gratitude to you all.

LG Chem improved profitability of the petrochemical business with stronger cost competitiveness, increase in premium product sales and better supply capacity of core businesses such as SAP, BR and Metallocene PE. In the IT & electronic materials business, we firmly secured the No. 1 position in the

global polarizer market and built a production line for 3D Film Patterned Retarder (FPR) for the polarized glasses which we successfully commercialized. Backed by a key customer base such as Apple, Nokia and HP, we also expanded our market share in the global battery industry and improved our product structure to focus on high capacity, high value-added products and strengthened business competitiveness with innovative materials and higher productivity.

Along with such business activities, we have always been keeping a close watch on the impact of environmental issues on our business. Recognizing the severity of environmental issues such as global warming and water shortage, we have identified strategic action items and taken actions in phases in order to resolve them. Our R&D activities to produce a high-performance eco-friendly advanced automotive battery are also contributing to preserving the environment. In line with that, we are actively participating in the 'LG Green 2020' strategy which reflects LG

Group's strong commitment to green growth, and carrying out environmental management in a systematic and effective manner. As part of this effort, we plan to develop Ochang Plant, the world's largest advanced automotive battery plant, into the Mecca of the next generational battery business.

With corporate citizenship in mind, we will continue to make efforts to grow with local communities. In 2011, we carried out a project called 'Build a Library of Hope' to support the youth in need in local communities and expanded our programs to support the socially marginalized and to cultivate future talent. In addition, with a belief that suppliers are the inseparable part of LG Chem's growth, we signed on a Shared Growth Agreement again in 2011 and have operated a Shared Growth Initiative Committee to provide substantial and effective assistance to suppliers. We will always keep in mind that paying attention to shared growth and practicing it are desperately important especially in difficult times.

In this report, we have summarized various activities carried out during the past one year to share LG Chem's contributions to the sustainable development of the economy, environment and society. Especially, we conducted a materiality test in the preparation process, believing that the sustainability report is one of the most significant channels to promote communication with stakeholders. The task force formed for the materiality test gathered valuable opinions from employees and outside experts, based on which we identified strategically significant issues. One step further, Chinese subsidiaries' business performance and sustainability management activities in the environment and social sectors are specifically described in this report.

In the days to come, LG will remain committed to becoming the best 'Solution Partner' that enriches the lives of people and helps customers make achievements. We will also grow into one of the most trusted and respected global chemical companies that fulfills its corporate social responsibility. I would like to ask for your continued support and encouragement.

Thank you.

April 2012  
Peter Bahnsuk Kim  
Vice Chairman & CEO

# BUSINESS DOMAIN

With innovative materials and solutions, LG Chem strives to become a global leading company that grows with customers.

## PETROCHEMICALS



**LG CHEM SUPPORTS CUSTOMERS BY PROVIDING HIGH QUALITY PETROCHEMICAL MATERIALS IN A STABLE WAY.**

In the petrochemical business, LG Chem has completed a vertically integrated structure through its mergers with LG Daesan Petrochemicals in 2006 and LG Petrochemical in 2007 and takeover of SAP business in 2008. The business foundation in China has also been stabilized with the ABS production capacity expansion project recently completed. Based on the cost competitiveness of basic petrochemicals, LG Chem is now expanding the sales of premium products so as to raise business competitiveness. In the near future, we will nurture our core business intensively, materialize high-performance eco-friendly business, and continue to strengthen conventional business. In the mid-to long-term, we will strive to improve our business structure and to expand core business globally.

**NCC/PO** LG Chem produces basic petrochemicals (ethylene, propylene) and diverse high-performance PE/PP products, built upon the vertically integrated structure and best-in-class cost competitiveness.

**PVC** LG Chem is ranked No. 1 in Korea and No. 6 in the global market of PVC - plastics which is widely used as construction materials for pipes, window frames, and floor-coverings.

**ABS/EP** LG Chem produces diverse high-performance ABS and highly heat-resistant, high-performance engineering plastic materials for electrical & electronic, and automotive applications. Built upon the global No. 1 position in the ABS business, we are leading the market at home and abroad.

**Acrylates/Plasticizers** LG Chem produces acrylates and plasticizers used as feedstock to make super-absorbent polymers, paints and adhesives. We are now expanding the high value-added super-absorbent polymers business.

**Synthetic Rubbers & Specialty Polymers** LG Chem produces synthetic rubbers for tires, MBS which is an impact modifier, SBS for asphalt, latex for paper and gloves, and BPA which is feedstock for PC and epoxy.

## IT & ELECTRONIC MATERIALS



**LG CHEM IS BRINGING FORWARD THE FUTURE OF CUSTOMERS BY DELIVERING MATERIALS THAT ADVANCED TECHNOLOGIES ARE INTEGRATED.**

LG Chem successfully commercialized LCD polarizers for the first time in Korea in 2000. Since then, LG Chem has grown rapidly in the areas of LCD materials such as polarizers, photoresists and brightness enhancement films as well as IT materials such as battery materials, circuit board materials and toners. Especially, just 10 years into our operation in the polarizer business which had been dominated by Japanese companies, we gained the No. 1 position in 2009, thanks to our continuous R&D efforts. IT & electronic materials are not visible on the outside, but they are increasingly taking on more significance as a part or material that takes a key function of final products such as LCD, rechargeable battery and solar cell. LG Chem will reinforce our standing as a global leading company in the advanced parts · materials business and seek sustainable growth built upon innovative technology.

**Optical Materials** LG Chem produces key materials of display products such as polarizers and 3D FPR (Film Patterned Retarder). Since 2009, we have retained the No. 1 position in the global polarizer market and built upon excellent product development and mass production technology, we successfully commercialized 3D FPR in 2010 for the first time in the world, contributing to expanding the 3D TV market.

**Electronic Materials** We provide innovative solutions such as display materials (photoresist, LCD stripper, OLED material), rechargeable battery materials (cathode material, electrolyte) and circuit board materials. In particular, LG Chem is ranked No. 2 in the global photoresist market due to excellent performance, and positioned as a top player in the next generational display, OLED materials business.

**IT Films** We focus on high-performance films such as LCD back light films as well as touch panel film and solar cell back sheet which are expected to grow fast.

## ENERGY SOLUTION



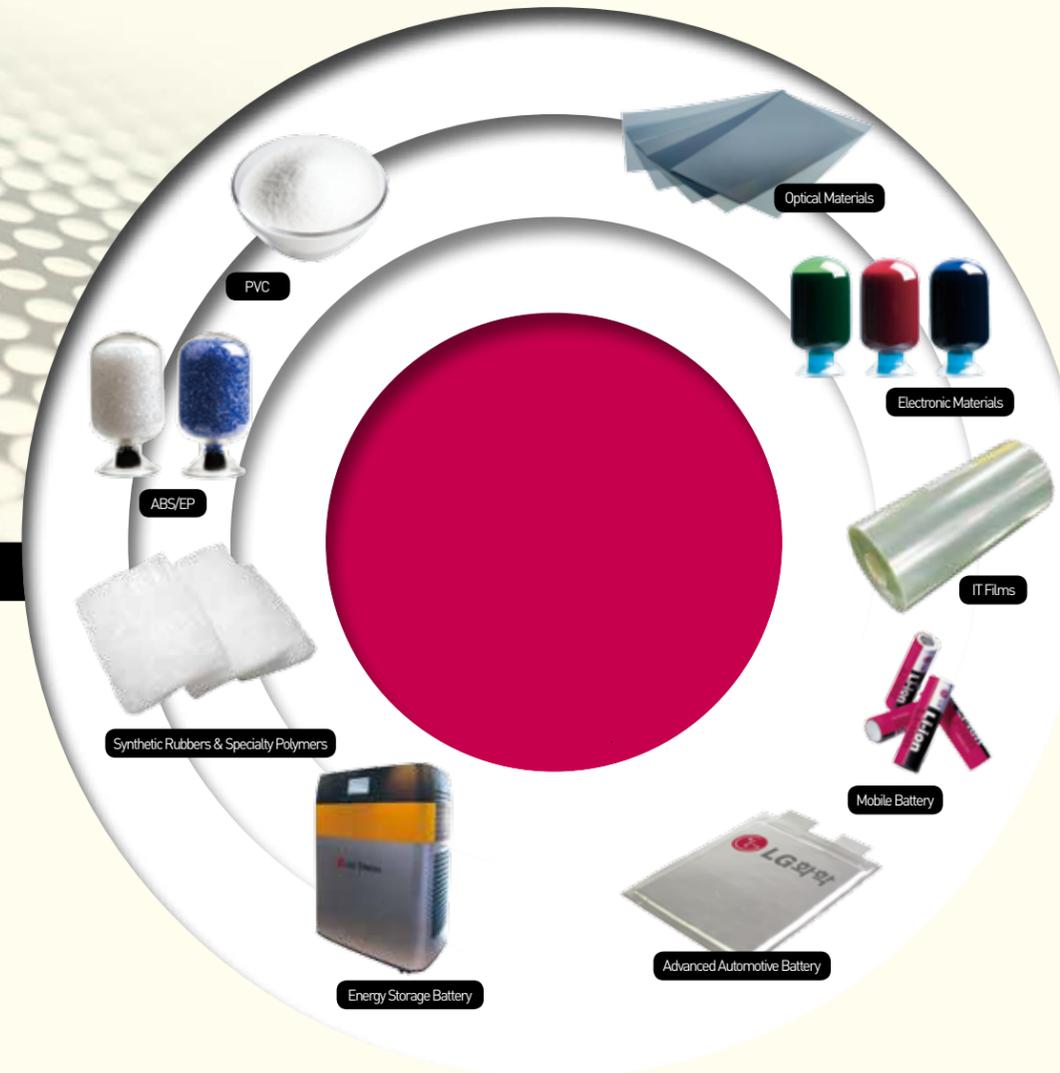
**LG CHEM IS LEADING THE ECO-FRIENDLY EVOLUTION OF THE ENERGY INDUSTRY BY PROACTIVELY DEVELOPING INNOVATIVE MATERIALS AND NEXT GENERATION BATTERIES.**

LG Chem successfully developed a lithium-ion battery for the first time in Korea in 1999. We produce mobile batteries used for laptops, mobile phones, as well as tablet PCs and power tools, and we are now nurturing the advanced automotive battery business into a next generation growth engine with the best-in-class technology. Through contracts with Southern California Edison in USA and SMA Solar Technology in Germany, we made our way into the household Energy Solution System (ESS) industry. Furthermore, we signed a long-term contract with ABB, the leading power and automation technology group, to supply megawatt-level ESS batteries which will serve as a spring board to advance into the European industrial and power grid ESS market. We will continue to strengthen the profitability of mobile battery business and accelerate our drive for the advanced automotive/energy storage system battery business so as to reinforce the global No. 1 position.

**Mobile Battery** Backed by excellent productivity and technology, LG Chem supplies more than 20% of mobile battery requirements around the world. Mobile batteries are widely used for portable media devices such as laptops, camcorders, mobile phones and tablet PCs. Thanks to material development, the use of mobile battery is now extended into non-IT purposes such as power tools and e-bike.

**Advanced Automotive Battery** After 10 years of R&D activities, LG Chem is ranked 1st in the advanced automotive battery business worldwide. Currently, we have entered into advanced automotive battery supply agreements with 10 major automotive companies worldwide such as Ford, Renault, Hyundai, Kia, Volvo and Chongqing Changan Automobile, which proves that our technology is a world leader.

**Advanced BESS (Battery Energy Storage System)** We are advancing into the smart grid/UPS business with the advanced technology and mass production capability for batteries and battery management system.



# MATERIALITY TEST

## PUBLICATION PROCESS

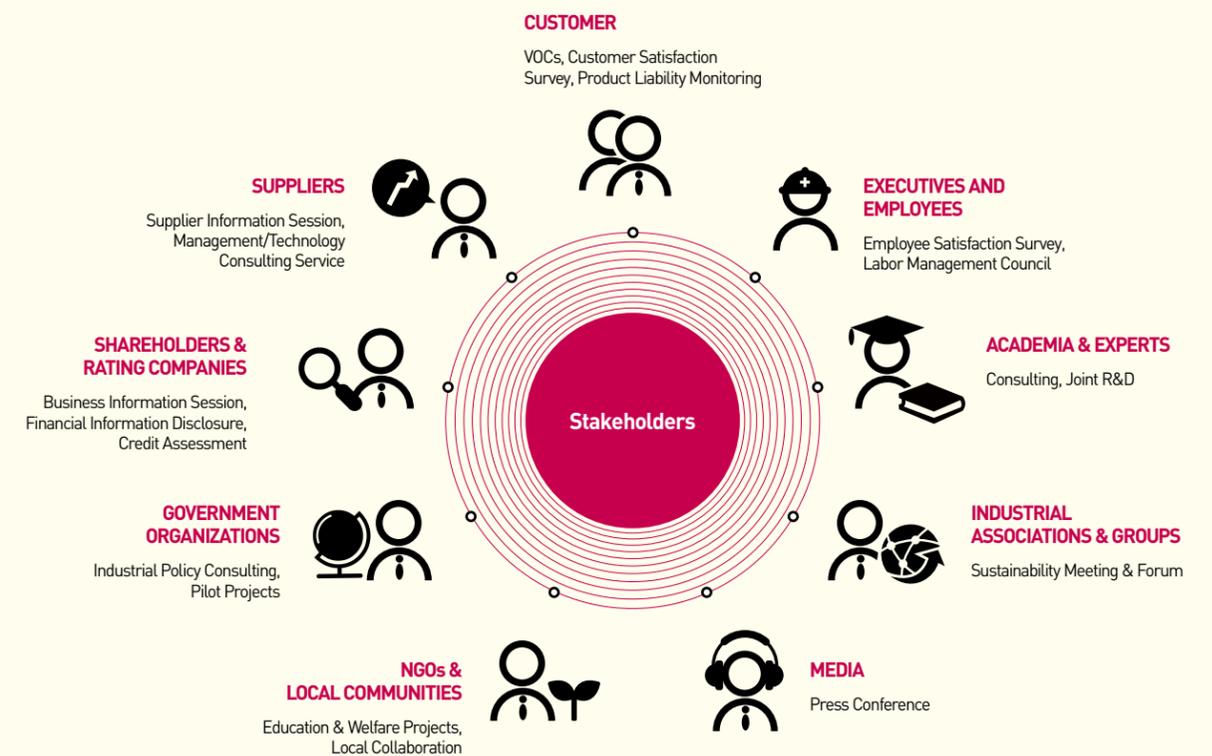
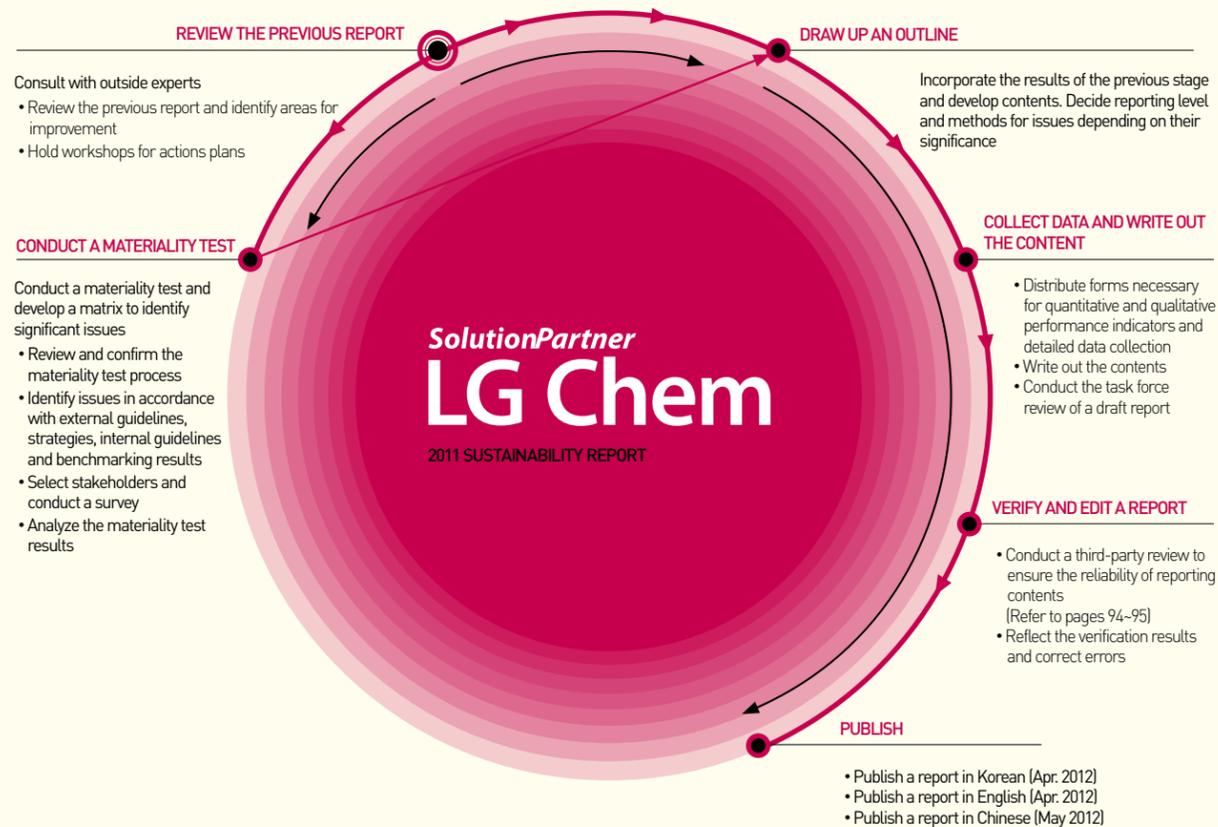
LG Chem got off to an early start to prepare this sustainability report, with a publication plan approved in November 2011. Then, a task force, formed in January 2012, embarked on the task of drawing up this report. In consultation with outside experts, the task force conducted a review of the previous sustainability report to identify areas for improvements and held workshops to incorporate the review results in the process of collecting data and writing out content.

Opinions of diverse stakeholders were also collected in efforts to address significant issues not only from the business perspective, but also from the perspective of stakeholders. Making it easier for stakeholders to understand the status and results of actions taken by LG Chem for issues relevant to them was considered important. To this end, we drew up the outline of this report with a focus on issues.

## STAKEHOLDER COMMUNICATION

Stakeholders are individuals or groups who have an interest in the business activities of a company and/or those who can affect or be affected by them. LG Chem has identified stakeholders after taking into consideration mutual impact between the company and stakeholders, proximity to our plants, and direct & indirect accountability related to our business activities. In addition, stakeholders are grouped based on stakeholder communication activities conducted by working-level teams. Taken all together, LG Chem has defined stakeholder groups to be Customers, Suppliers, Shareholders & Rating Companies, Government Organizations, NGOs & Local Communities, Media,

Industrial Associations & Groups, and Academia & Experts. Stakeholder communication activities are very conducive to LG Chem's sustainability management. Through diverse stakeholder communication channels, LG Chem identifies issues significant to stakeholders and better understands how the company can affect and be affected by stakeholders with respect to issues identified. In addition, while identifying significant stakeholders and communicating with them about sustainability management performance, LG Chem is improving sustainability management further.



# MATERIALITY TEST

## Objective

LG Chem recognizes this sustainability report as one of the most important channels to communicate with stakeholders. A materiality test is a continuous process not only to define report content of a sustainability report, but also to identify demands and expectations of stakeholders so as to reflect them into management decision-making. LG Chem takes into consideration principles presented in the GRI (Global Reporting Initiative) which are completeness, sustainability context, materiality and stakeholder inclusiveness in the process of preparing the sustainability report.

## What are Significant Issues?

It is fair to say that sustainability management is a stakeholder centered management. Significant issues for sustainability management are what are significant for management goals, strategies, policies of LG Chem as well as what stakeholders are interested in or consider significant in their decision-making. Therefore, in order to identify significant issues, we assess the significance of issues from the perspective of LG Chem management as well as from the perspective of stakeholders.

## Materiality Test Process and Results

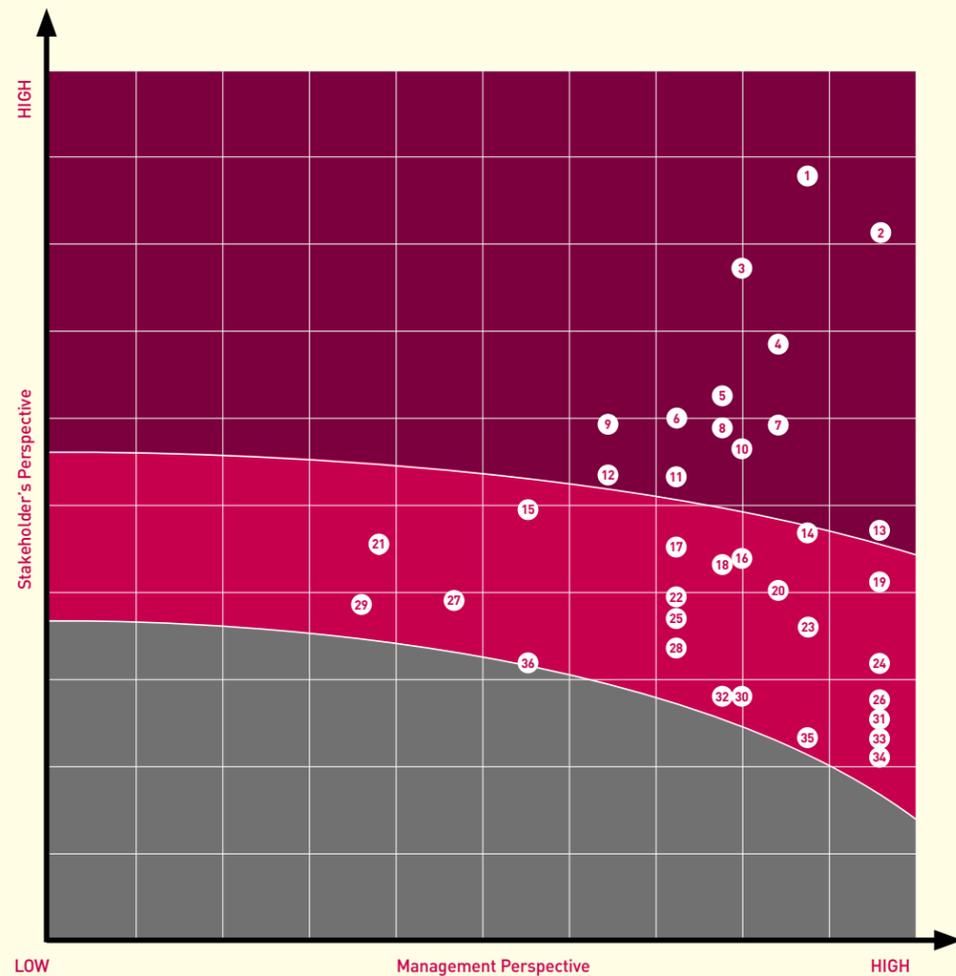
### [ Issue Identification ]

For a materiality test, issues that are relevant to sustainability needed to be identified first. To this end, LG Chem conducted a review of internal guidelines such as management strategy, code of conduct, fair trade guideline, environment safety policy, eco-friendly environment certification guideline as well as external guidelines such as GRI guideline, ISO 26000, and EICC. In addition, a check of media reference, benchmarking results and stakeholder interviews was conducted. As a result, 59 issues in seven categories were identified.

### [ Materiality Test ]

For issues previously identified, a survey was conducted from two perspectives: management and stakeholders. In the process of producing final results, the reliability of the survey and the significance of stakeholders were taken into account. Taken all together, the relative significance of each issue was determined. Issues identified were all considered significant; however, it was required to focus on issues located on the top right of the matrix based on relative significance. Accordingly, the results of materiality test were incorporated into the process of determining a reporting level or method in the sustainability report. In the meantime, in order to improve the reliability of the materiality test process, we consulted with outside experts on the process and results of materiality test.

## Materiality Test Matrix



### Survey Overview

- 1) Respondents:
  - 451 External Stakeholders (Customers, Suppliers, Shareholders and Credit Rating Companies, Government Organizations, NGOs & Local Communities, Media, Industrial Associations & Groups, Academia and Experts)
  - 579 Internal Stakeholders (Executives and Employees)
- 2) Period: Jan. 18, 2012 - Jan. 31, 2012

Issues	Information	Pages
1	Climate change response	12, 13, 54, 57
2	Sales increase and continuous growth through new business	16, 17, 42, 44, 45
3	Fair trade (cartel, monopoly, rejection of trade)	68, 69
4	Worker's health and safety	14, 15, 32, 47, 48
5	Job security	70-73
6	Fair selection & evaluation of suppliers	66
7	Determination & leadership of top management	4, 5, 26, 28-30
8	Balance between work and personal life	18, 19, 75
9	Shared growth	67
10	Technology innovation	44, 45
11	Products considering final user's health and safety	63, 64
12	Efficient energy use and reduction technology development	49, 50, 52, 53, 56, 57, 89, 90
13	Product quality	59, 60, 63, 64
14	Chemical substance management	60, 61
15	Economic performance distribution	41, 88
16	Eco-friendly product design & production	59, 60
17	Job creation	70, 73
18	Fair evaluation & compensation	26, 71
19	Jeong-Do management	26
20	Fair opportunity and non discrimination	16, 17, 27, 44, 57
21	Use and investment of new & renewable energy	16, 17, 27, 44, 57
22	Customer management system	63, 64
23	Monitoring or response to regulation and policy	60, 61
24	Cost reduction	39, 40, 42, 43
25	Stronger internal capability	71-74
26	Market exploration	16, 20, 42, 43
27	Stakeholder communication	9-11, 18, 19
28	Organizational culture	24-26, 74
29	Vision and strategy for sustainability management	24, 25
30	Corruption and bribery	26
31	Establishment of global operation base	39, 43, 108, 109
32	Labor-management relations	76, 77
33	Financial risk management	31-33
34	Price competitiveness	42, 43
35	Supply chain management	66-69
36	Consumer right protection	63, 64

### Other Sustainability Issues

Better Consumer Awareness (Ethical Consumption, Eco-Friendly Consumption, Sustainable Consumption Encouragement), Company-Wide Risk Management, Operation of Sustainability Management Organization, Awareness and Training of Sustainability Management, Production Capacity Expansion, Encouragement for Suppliers to Comply with Laws and Social Norms Related to Human Rights and Labor, Risk Management, Stronger Marketing, Strategic Social Contribution, Brand Management, Prevention of Air-Water-Land Pollution, Employment of the Socially Underprivileged (People with Disability), Supplier Procurement of Eco-Friendly Raw Materials (Eco-Friendly Encouragement), Responsible Advertisement Marketing, Waste Reduction (Higher Recycling Rate), Prevention of Sexual Harassment, Responsible Political Contribution-Donation, Lower Water Consumption, Nurturing of Female Workforce, Ban on Child Labor and Forced Labor, Participation of Public Policy Development, Philanthropic Social Contribution, Reduction of Environmental Impact at the Transportation Stage

LG Chem will remain committed to improving sustainability management performance. Other sustainability issues mentioned above can be found in the sustainability report, LG Chem Website (<http://lgchem.com>) or Business Reports.

# FOCUS ISSUE 1

## GREENOVATION

### GHG · Energy Management System

LG Chem has established a web-based system called Greenhouse gas · Energy Management System (GEMS) in order to respond to the GHG · Energy Target Management system introduced in Korea in 2011 and to minimize the risk of diverse GHG · energy regulations at home and abroad.

GEMS enables us to manage and analyze data on energy usage and GHG emissions by plant or equipment which is used to build a statistical database. In addition, we register GHG reduction projects, monitor the progress of the projects and manage final reduction results in the system. GEMS is also used to manage the history of construction, expansion or shutdown of emission facilities by plant, which allows us to save time and cost necessary for a GHG emission report to be made to the government every year. One step further, we plan to establish QA/QC guidelines and internal/external verification systems for measuring equipment in efforts to improve the reliability of data on GHG and energy.

In 2012, we will interface GEMS with the ERP system, which then will be applied to overseas plants in an endeavor to respond to the GHG · Energy Target Management system in a more efficient manner. Through the extended GEMS, we will actively respond to the Emission Trading System which is expected to be introduced in 2015 and aggressively participate in carbon markets at home and abroad.



Reduction target of  
GHG emissions by 2020 below BAU

# ↓ 23%



#### THE FRAMEWORK ACT ON LOW CARBON & GREEN GROWTH / TARGET MANAGEMENT

As energy & resource crisis and climate change are emerging as global issues, the Korean government established the Framework Act on Low Carbon and Green Growth in order to achieve green growth in an efficient and systematic manner. At the same time, the Korean government announced the national target of reducing GHG emissions by 30% from the BAU level by 2020 and, to this end, introduced the GHG · Energy Target Management system.

#### GEMS DEVELOPMENT STAGE AND PLAN

Milestones	GEMS Introduction	GEMS Upgrading	GEMS II (Additional Module)
Period	2007-2008	2009-2010	2011-2012
Objectives	<ul style="list-style-type: none"> <li>Systematically manage energy usage and GHG emission at a company-wide level</li> </ul>	<ul style="list-style-type: none"> <li>Improve the reliability of emission data via third-party verification</li> </ul>	<ul style="list-style-type: none"> <li>Efficiently respond to government regulations at home and abroad</li> </ul>
Users	<ul style="list-style-type: none"> <li>Plants in Korea (pilot plants only)</li> </ul>	<ul style="list-style-type: none"> <li>Plants in Korea (12 Plants)</li> </ul>	<ul style="list-style-type: none"> <li>All plants in Korea (including distribution center and Leadership Center)</li> <li>Plants in China</li> </ul>
Key Functions	<ul style="list-style-type: none"> <li>Energy usage management module</li> <li>GHG inventory module</li> <li>Reduction project management module</li> </ul>	<ul style="list-style-type: none"> <li>System upgrade in line with the international guideline for GHG emission calculation</li> </ul>	<ul style="list-style-type: none"> <li>Application to overseas plants</li> <li>System language (English or Chinese)</li> <li>Target management module</li> <li>Water management module</li> </ul>

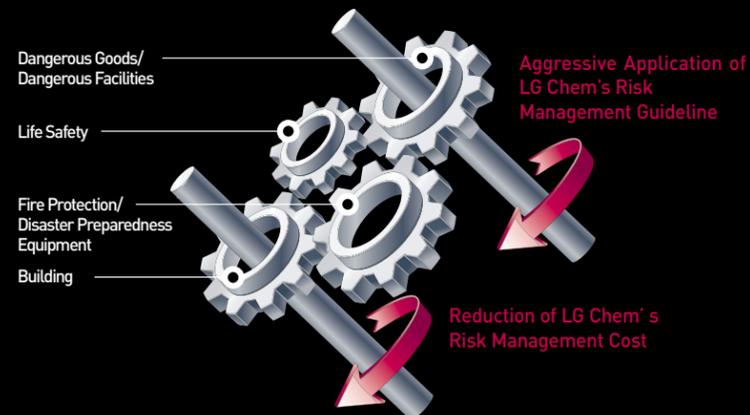
## RISK MANAGEMENT

### Loss Control Guideline

LG Chem has developed an optimized risk management (RM) guideline based on global standard codes. LG Chem's RM guideline consists of 13 chapters in four areas : building, fire protection, life safety and dangerous facilities (special hazard) with an aim to secure the optimized capability of risk management and to reduce cost in the long-term.

In order to develop the RM guideline in 2009, LG Chem conducted an adequacy review of fire protection facilities, safety management & life safety programs and a diagnosis of special hazard facilities so as to identify risk unique to LG Chem. Based on the result, LG Chem introduced the RM guideline to assembly plants in 2010 and then to petrochemical plants in 2011. Our RM guideline has been used to remove potential hazards in the existing plants, and it is also considered in the decision-making for new projects (in Ochang Plant II and Paju Plant).

Built upon the RM guideline, LG Chem will continue to strive to secure the highest level of RM capability and minimize RM cost.



# FOCUS ISSUE **3**

## ENERGY STORAGE SYSTEM

### Advance into the European Energy Storage System Market

LG Chem is advancing into the European energy storage system (ESS) market. To this end, LG Chem signed on a long-term contract with ABB, one of the world's leading electric power engineering companies to supply a megawatt-level ESS battery. Under this contract, LG Chem will provide a lithium-ion battery and a battery management system (BMS) to diverse ESS projects led by ABB.

This agreement has put LG Chem in an advantageous position to advance into the European energy storage system market which is a leading market for grid-scale ESS. Therefore, the successful supply of a megawatt-level ESS battery will serve as a springboard for LG Chem to advance into the grid-scale ESS business. The grid-scale ESS is a back-up system that can store electric power in a battery and feedback power to the power grid, so it requires a large capacity battery that stores electric power at a megawatt level.

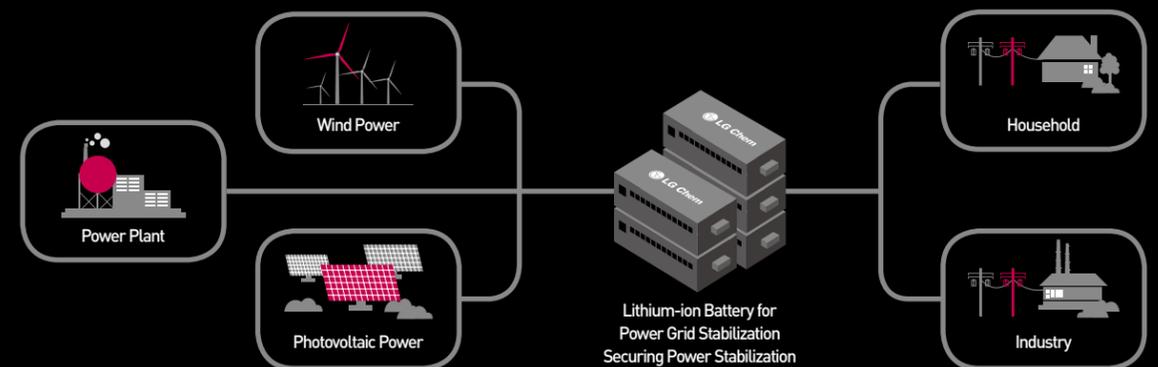
Even in the household ESS sector, LG Chem conducted a household ESS supply project with Germany-based SMA, the global No. 1 company in the photovoltaic power inverter market in 2011. Prior to this, LG Chem, together with SCE, the largest electric power company in California, USA, embarked on the demonstration project for household ESS.

The energy storage system is a key to success of smart grid, a digitally enabled electrical grid that gathers, distributes and acts on information about the behavior of all participants in order to improve the efficiency of electricity services. It is expected that the ESS lithium-ion battery market will grow to KRW 15 trillion in 2020 worldwide.



Global ESS lithium-ion battery market is expected to grow to KRW 15 trillion by 2020.

# KRW 15 Trillion



## RESPONSIBILITY

### LG Chem Chemistry Camp for the Dream of Youth

LG Chem has opened 'Fascinating Chemistry! LG Chem Chemistry Camp' during school vacations every year. Diverse programs to make chemistry more interesting and accessible to participants are provided in our camps targeting middle school students.

'LG Chem Chemistry Camp' is one of our outreach programs that reflects our identity as a chemical company. Since 2005, the camp has been held four to five times a year, attended by some 700 middle school students. Now the camp has grown into one of the most representative social contribution activities that LG Chem has carried out targeting adolescents. This 3-day event consists of fun and educational programs such as exciting chemistry experiments and chemistry magic shows as well as other programs such as UCC contests and the King of Study to help the students do better at school.

In 2011, we encouraged the participation of youths from low income families. To this end, we invited a total of 400 students from community welfare centers or low income families to our chemistry camp four times in January 2011. In addition to the existing first-hand experience programs, we have continuously added new programs to make camp more attractive to participants such as Global Citizen Education which helps participants realize the importance of social service and Vision Lecture in which participants draw up a vision on their own.

Going forward, LG Chem will try hard to give dream and hope to the youth who have relatively fewer educational welfare opportunities in association with community welfare centers and education offices. At the same time, we will continue to develop youth education programs based on our identity as a chemical company as part of efforts to make social contributions.



LG Chem plans to provide 3,500 students from local youth centers or the low income families with Chemistry Camp to support the dream of the youth.

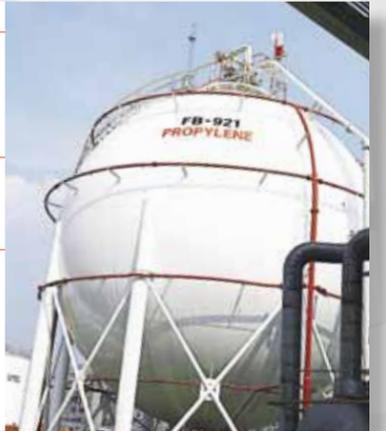
# 3,500

Students

# 2011 SUSTAINABILITY MANAGEMENT PERFORMANCE AND FUTURE PLANS

LG Chem sets strategic objectives to improve our performance in the economic, environmental and social sectors, and some of the major achievements from 2011 and future plans are outlined below.

Item	Major Achievements in 2011	Future Plans	
<b>01</b> <b>Economy</b> 	<b>Economic Achievements</b> <ul style="list-style-type: none"> <li>» Korean No. 1 in petrochemical product sales</li> <li>• Global No. 1 in ABS market</li> <li>• Global No. 6 in PVC market</li> <li>• Global No. 7 in SAP market</li> <li>• Global No. 8 in BPA market</li> <li>• Korean No. 1 in ethylene production</li> </ul>	<ul style="list-style-type: none"> <li>» Global No. 1 in LCD polarizer market</li> <li>» Recorded over KRW 2 trillion in mobile battery sales</li> </ul> <p>* For key performance indicators, please refer to Appendix</p>	
	<b>Overseas Market Expansion</b> <ul style="list-style-type: none"> <li>» Expanded ABS and EP production lines in China</li> <li>» Expanded EP production lines in Poland</li> <li>» Supplied advanced automotive batteries to major automotive companies including Renault</li> </ul>	<ul style="list-style-type: none"> <li>» Signed a long-term contract with Switzerland-based ABB to supply a megawatt-level ESS battery</li> <li>» Worked with Germany-based SMA to supply household ESS batteries</li> </ul>	<b>Future Plans</b> <ul style="list-style-type: none"> <li>» Investment in new businesses as future growth engine</li> <li>• Continuous investment in large-scale new businesses (e.g. advanced automotive battery and LCD glass substrate) to build fundamentals for the global No. 1</li> <li>» Rank global No.1 in the advanced automotive battery by 2015</li> <li>• Supply batteries for 350,000 electrical vehicles by 2013</li> <li>• Increase the market share to 25% by 2015</li> </ul>
	<b>Technological Competitiveness (Technology Alliance, Patent)</b> <ul style="list-style-type: none"> <li>» Established a joint venture with Kazakhstan's state-run United Chemical Co. to build ethane cracker and PE complex</li> <li>» Developed technology to manufacture high-performance / eco-friendly products</li> <li>» Acquired a patent for new catalyst manufacturing technology</li> <li>» Established a joint venture with Hyundai Mobis to produce advanced automotive battery pack</li> </ul>	<ul style="list-style-type: none"> <li>» Conducted electric vehicle development with GM</li> <li>» Signed on MOU with POSCO ICT for cooperation in smart grid project</li> <li>» Signed on MOU with Germany-based Sud-Chemie to establish a joint venture for secondary battery cathode materials</li> <li>» Acquired a patent related to OLED</li> <li>» Acquired a green technology certificate for lithium-ion battery</li> </ul>	<ul style="list-style-type: none"> <li>» Continuously expand global production base</li> <li>• Build / expand production lines in China, India, South East Asia and Kazakhstan</li> <li>» Focus on fostering base technology for core business to achieve profitable growth built upon the best quality and cost competitiveness</li> <li>» Materialize new business in the high-performance / eco-friendly material industry so as to secure future growth engine</li> <li>» Produce basic petrochemicals out of low cost natural gas and shale gas</li> <li>» Develop carbon nanotube and biomass product</li> <li>» Produce on-purpose BD products through in-house development of catalysts</li> </ul>



Item	Major Achievements in 2011	Future Plans	
<b>02</b> <b>The Environment</b> 	<b>Environment &amp; Safety in the Plant</b> <ul style="list-style-type: none"> <li>» Strengthened self-regulating environment management through Environment Performance Index</li> <li>» Acquired and extended Green Company Certification</li> <li>» Expanded application of LDAR</li> <li>» Introduced environmental risk evaluation system</li> </ul>	<ul style="list-style-type: none"> <li>» Increased resource reuse rate</li> <li>» Improved waste heat recovery and utility efficiency</li> <li>» Carried out activities to spread green mind</li> <li>» Established environmental management system (corporate RC Committee with environment &amp; safety managers across all plants)</li> </ul>	
	<b>Climate Change Response</b> <ul style="list-style-type: none"> <li>» Reduced GHG by 5% below BAU</li> <li>» Started emission trading between Korean and Chinese plants</li> </ul>	<ul style="list-style-type: none"> <li>» Conducted 'Green Management' driven by fuel exchange project</li> <li>» Installed photovoltaic power generation system</li> </ul>	<b>Future Plans</b> <ul style="list-style-type: none"> <li>» Invest in green business</li> <li>» Improve operation of Environment Performance Index</li> <li>» Conduct strategic projects to make environmental achievements</li> <li>» Establish a recycling system for discharge water</li> <li>» Strengthen environment &amp; safety emergency response</li> </ul>
	<b>Hazardous Substance Management</b> <ul style="list-style-type: none"> <li>» Built a database for chemical substance management</li> <li>» Established a REACH response system</li> </ul>	<ul style="list-style-type: none"> <li>» Guaranteed the environmental sustainability of products</li> </ul>	<ul style="list-style-type: none"> <li>» Reduce GHG emissions by 23% from the BAU level by 2020</li> <li>» Prepare for Emission Trading System to be introduced in 2015</li> <li>» Carry out Global Product Strategy activities</li> <li>» Analyze GHG reduction potentials and develop green technology for GHG reduction</li> <li>» Establish a system to respond to the Act on the Registration and Evaluation of Chemicals</li> </ul>



Item	Major Achievements in 2011	Future Plans	
<b>03</b> <b>Society</b> 	<b>Securing Core Talent</b> <ul style="list-style-type: none"> <li>» Actively carried out recruitment of overseas R&amp;D talent</li> <li>• Top management-led recruitment such as BC Tour &amp; Tech Fair in America and Japan</li> <li>» Strengthened advance recruitment programs targeting science &amp; engineering human resources</li> <li>• Provided customized &amp; internship programs to 140 students in summer and winter</li> </ul>	<ul style="list-style-type: none"> <li>» Selected 13 research &amp; one professional fellows since the introduction of Research / Professional Fellowship in 2008</li> </ul>	
	<b>Pursuing Shared Growth with Suppliers</b> <ul style="list-style-type: none"> <li>» Strengthened green partnership</li> <li>» Provided financial support from LG Win-Win Fund and Network Loan / Family Loan</li> <li>» Improved payment term significantly</li> <li>» Implemented plans to support secondary suppliers such as shared growth agreement between primary and secondary suppliers</li> <li>» Expanded localization of core parts &amp; materials / equipment</li> <li>» Provided suppliers with technological support</li> </ul>	<ul style="list-style-type: none"> <li>» Supported suppliers to grow into a global company such as joint advance into overseas market and technology training</li> <li>» Operated online VOC channel for suppliers</li> <li>» CEO's visit to excellent suppliers in shared growth (in February)</li> <li>» LG Chem-led Shared Growth Initiative Committee (three times)</li> <li>» Advance notice of petrochemical product invoice price</li> </ul>	<b>Future Plans</b> <ul style="list-style-type: none"> <li>» Strengthen the recruitment of R&amp;D and engineering talent for future growth &amp; core business</li> <li>• Improve recruitment competitiveness for R&amp;D human resource</li> <li>• Secure production / process engineers for future growth business</li> <li>» Continue to select research/professional fellows</li> <li>» Continue to strengthen green partnership through expanding supplier participation in green business</li> <li>» Strengthen efforts to support secondary suppliers including giving additional points to primary suppliers that well support secondary suppliers</li> <li>» Strengthen efforts to support secondary suppliers</li> <li>» Continue to localize core parts &amp; materials / equipment through expanding the procurement of localized items</li> <li>» CEO's visit to excellent suppliers in shared growth</li> <li>» LG Chem-led Shared Growth Initiative Committee (quarterly)</li> </ul>
	<b>Social Contribution</b> <ul style="list-style-type: none"> <li>» 'Chemistry Camp' targeting students from low income families</li> <li>» 'Junior Science School' targeting three child care centers</li> <li>» 'Build a Library of Hope' project</li> <li>» 'Create a Classroom of Hope' with university students</li> </ul>	<ul style="list-style-type: none"> <li>» 'Musical Holiday' for military servicemen in remote areas</li> <li>» 'One Plant-One Military Unit Sisterhood Relation' to provide systematic support</li> <li>» Activities to support international marriage migrant women</li> </ul>	<ul style="list-style-type: none"> <li>» Continue to provide 'Chemistry Camp' and set a standard for selecting appropriate participants</li> <li>» Diversify programs for 'Musical Holiday'</li> <li>• Develop new programs customized to target audience (more than one program)</li> <li>» Activities for 'One Plant-One Military Unit Sisterhood Relation'</li> <li>• Provide opportunities for culture &amp; sports events and welfare benefits</li> <li>» Support multi-cultural families</li> <li>• Programs to help multi-cultural families adapt to the Korean society and to promote understanding about the multi-cultural families</li> </ul>



# 01

## SUSTAINABILITY MANAGEMENT SYSTEM



LG Chem is becoming Global No. 1 LG by practicing 'Jeong-Do' Management based on 'Creating Customer Value' and 'Respecting Human Dignity.' LG Chem is also raising corporate value based on management led by professionals and the board of directors, and making a decision in consideration of economy, the environment, human rights, labor and ethics in order to fulfill social responsibility.

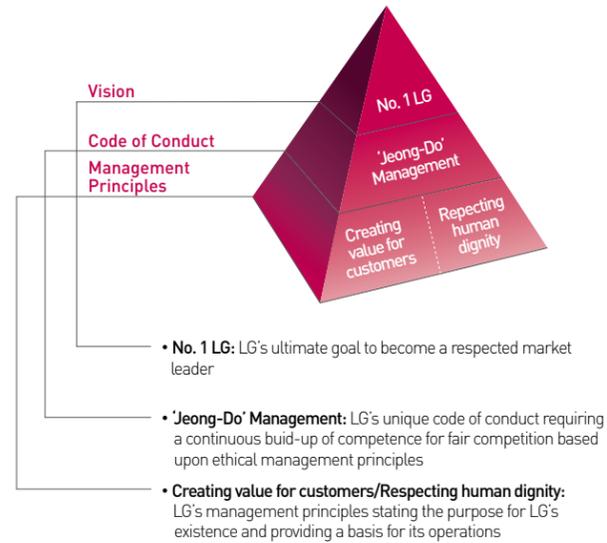
# VISION FOR SUSTAINABILITY MANAGEMENT

LG Chem is practicing 'Jeong-Do' Management based on 'Creating Customer Value' and 'Respecting Human Dignity' in order to become 'No. 1 LG'.



## LG Way

LG Way is the principle which guides the thoughts and actions of LG employees in attaining the ultimate goal of becoming 'No. 1 LG' through the practice of LG's unique code of conduct, 'Jeong-Do' Management, and LG's management principles, 'Creating value for customers' and 'Respecting human dignity.' 'No. 1 LG' means becoming a respected market leader that is trusted by customers, most attractive to investors, preferred by the talented, and considered formidable yet respected as a benchmark by competitors.



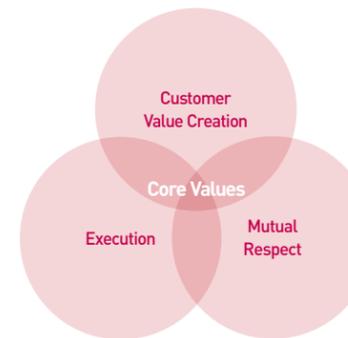
## LG Chem's Vision and Core Values

LG Chem, which actively participates in internalizing and practicing LG Way in order to achieve the vision of 'No.1 LG,' aims to be a global leader, growing with customers by providing innovative materials and solutions. Our such vision shows that achieving a shared growth with our customers through differentiated value offering is what defines the purpose for LG Chem's existence and serves as the force that propels us to become a Global Leading Company. In order to achieve the vision, employees of LG Chem base their thinking and behavior on core values which are 'Customer Value Creation,' 'Execution,' and 'Mutual Respect.'

### LG Chem's Vision

To be a global leader – Growing with customers by providing innovative materials and solutions

### Core Values



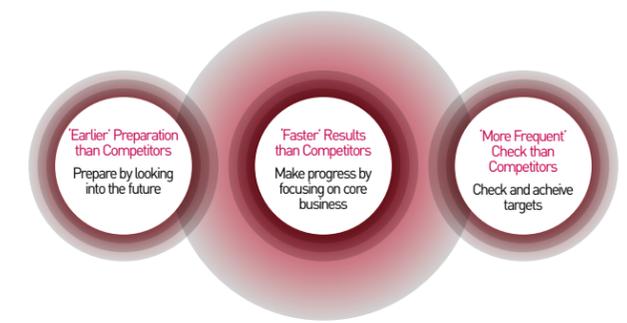
<b>Customer Value Creation</b>	We deliver value that improves customer performance and competitiveness substantially. We act to enhance customer value with a customer-centric mindset and a deep understanding of both our customers and their markets.
<b>Execution</b>	Execution is essential to bringing corporate objectives and aspirations to fruition. It is a systematic process that requires an objective view of reality, thorough analysis, and concrete planning to achieve our goals.
<b>Mutual Respect</b>	Mutual respect plays a key role in building effective teams and the capacity to make breakthroughs. This teamwork, strengthened by mutual recognition and respect, is what empowers us to achieve our goals.

## Practicing LG Way through Speed Management

Speed Management is LG Chem's unique way of putting LG Way into practice. It is intended to accelerate the speed of change in business and people by two times so as to become 'No.1 LG' that delivers sustainable performance excellence. Speed Management is being implemented in pursuit of 'No.1 in Core Business,' 'Customer Value Creation' and 'Global Organizational Capability'. To internalize Speed Management into our organization, we set 'Earlier than Competitors,' 'Faster than Competitors,' and 'More Frequently than Competitors' as action principles.

To continue excellent performance, we are implementing Speed Management with a focus on the strengths of business and people. We are pushing ahead with a core-focused strategy in which we focus time and effort on core businesses, while finding and reinforcing the strengths of employees. We are also transforming into an organization which is able to make a breakthrough by setting, focusing on and achieving Challenging Goals.

### Speed Management

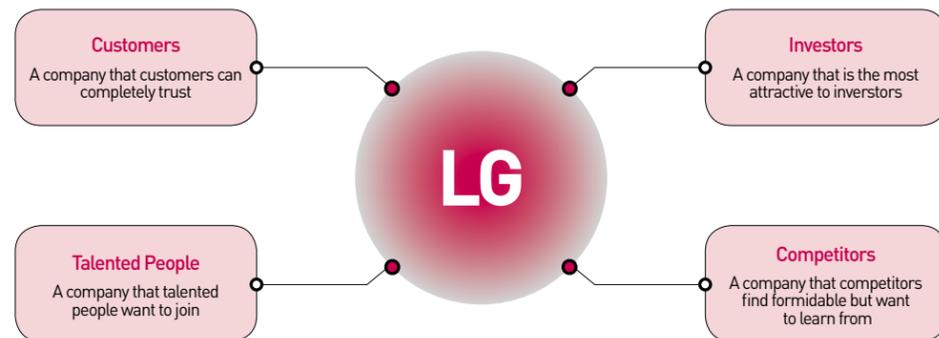


Double the Speed of Change in Business

$$E \text{ (Performance)} = M \text{ (Resource)} \times C \text{ (Speed)}^2$$

Double the Speed of Change in People

### No. 1 LG



- 1 LG that customers can completely trust** LG that is recognized to be the best in class by customers by impressing them with excellent quality and brand value
- 2 LG that is the most attractive to investors** LG that provides attractive value to investors with high return on investment
- 3 LG that talented people want to join** LG that provides the best workplace where the talented employees can work with a sense of ownership and enthusiasm
- 4 LG that competitors find formidable but want to learn from** LG that competitors find formidable yet respect as a benchmark by producing remarkable outcomes

## 'JEONG-DO' MANAGEMENT

'Jeong-Do' Management is the way LG operates based on which LG conducts ethical management and builds up capacity so as to play fair and win in the competition.

\* The English translation of 'Jeong-Do' is 'the right way.'



## Mechanism for 'Jeong-Do' Management

### History

In 1995, LG officially declared 'Jeong-Do' Management into which ethical management was materialized. Under a holding company regime launched in 2003, LG proclaimed LG Way in 2005, continuously implementing 'Jeong-Do' Management.

### LG Code of Ethics

LG Chem is respecting the economic order of free market and seeking the common interest of all stakeholders so as to grow into a global No. 1 company. To this end, LG Chem is actively encouraging all employees to practice LG Code of Ethics which is the principles that all employees use to guide their thinking and behavior. LG Code of Ethics can be found at <http://ethics.lg.co.kr>

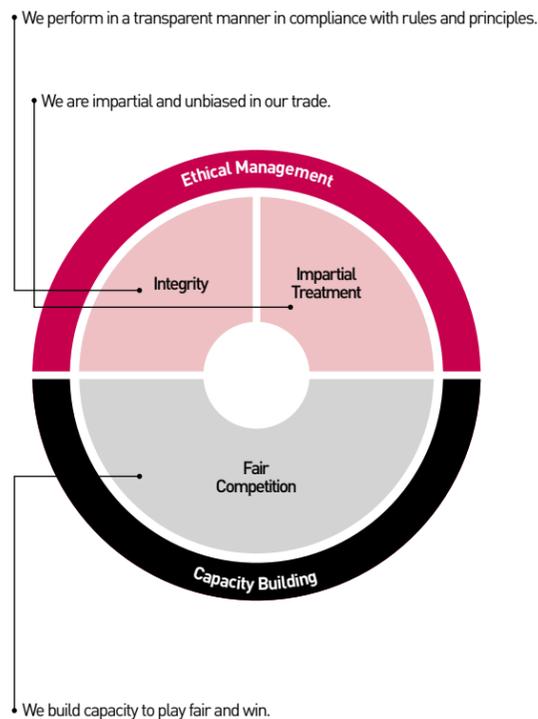
### CEO's Resolute Commitment

Every employee at LG Chem shares the CEO's resolute commitment to 'Jeong-Do' Management: "Don't be tempted to take shortcuts and play fair especially during tough times." "Build up global competitiveness in order to create sustainable performance by implementing ethical management and Speed Management which meet the standards of global company."

### Driving Organizations

LG Chem is executing 'Jeong-Do' Management activities by forming a driving organization for each division at the head office in order to realize 'Jeong-Do' Management effectively.

### 'Jeong-Do' Management



<b>Internal Audit Teams</b>	<ul style="list-style-type: none"> <li>Check the implementation and the compliance of corporate policy, directives, regulations or management instructions</li> <li>Maintain a systematic management structure across the organization &amp; promote management rationalization</li> <li>Contribute to developing business transparency and sound corporate culture</li> <li>Perform regular audits at every location of operation at home and abroad in accordance with a yearly plan</li> </ul>
<b>Internal Audit Council</b>	<ul style="list-style-type: none"> <li>Independent deliberative body</li> <li>Secure the fairness of internal audit and the results</li> <li>Perform internal audits on organizations of legal affairs, HR (or labor-management relation) as internal audits</li> </ul>
<b>Action Programs</b>	
<b>Ethics Hotline</b>	<ul style="list-style-type: none"> <li>A reporting system for violations against 'Jeong-Do' Management</li> </ul>
<b>Gift Receipt Reporting System</b>	<ul style="list-style-type: none"> <li>Voluntarily report the case to the Internal Audit Teams within three working days as per the reporting guidelines</li> <li>Submit the received gift or money to the company.</li> <li>Such reported goods are then converted into cash through internal auctions and donated to social welfare facilities</li> </ul>
<b>'Jeong-Do' Management Pledge</b>	<ul style="list-style-type: none"> <li>Everyone at LG Chem and suppliers sign up to the 'Jeong-Do' Management Pledge every year via online, to pledge their commitment to complying with the LG Code of Ethics and 'Jeong-Do' Management</li> </ul>
<b>'Jeong-Do' Management Survey</b>	<ul style="list-style-type: none"> <li>Conduct surveys on our executives and employees with a view to gauge the level of their awareness about 'Jeong-Do' Management, and to identify areas for improvement</li> </ul>

## GREEN MANAGEMENT

LG Chem is realizing 'LG GREEN 2020' by minimizing the environmental impact of business activities across the board, expanding green products, launching green business, and conducting diverse innovation programs.



## Relations between LG Way and Green Management

LG Chem is practicing 'Green Management' in order to create new customer value and to contribute to the nation and society by minimizing the environmental impact, expanding green products and strengthening green business. With rising energy prices due to expanded consumption of emerging economies and worsening water shortage, energy and water have recently been emerging as a major source of value. Under this circumstance, the demand for corporate social responsibility, such as GHG reduction and environmental protection, is growing and green management is required for achieving 'No. 1 LG' from the mid-to long-term perspective.

In 2010, 'LG Green 2020' Strategy was announced at the LG Group level in consideration of growing interest and needs of stakeholders on the environment and energy. The Strategy reflects a strong commitment that LG will respond to climate change aggressively and practice sustainability management to achieve green growth.

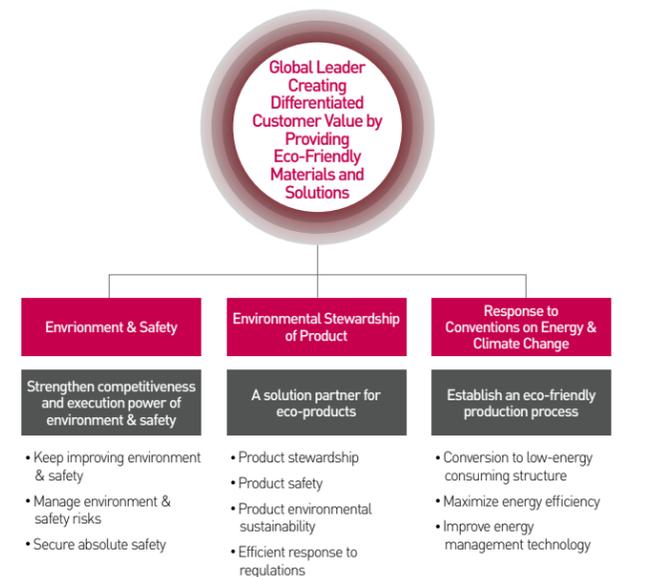
## Direction for Green Management

LG is aiming for becoming 'No. 1 Greenovation Company' by 2020 by 'Making Core Business Green' and 'Leading Green Business'. 'No. 1 Greenovation Company' is a company that promotes differentiated competitiveness and sustainable growth in the core business and secures market leadership in green business.

### Five Action Items for Green Management

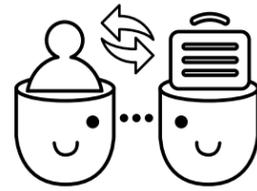
<b>1 Strengthen R&amp;D and Capital Investment</b>	Develop technologies for efficient plant operation, pollutant reduction and water recycling and make investment for their application
<b>2 Improve Portfolio Continuously</b>	Minimize environmental risk by fully reviewing environmental factors such as greenhouse gas and water when building or expanding plants
<b>3 Develop Green Products Aggressively</b>	Enhance energy efficiency of products, minimize resource consumption, and expand products that improve life quality
<b>4 Expand Investment in Green Business</b>	Expand investment in three areas: automotive, energy, and living & eco solution
<b>5 Reinforce Green Partnership</b>	Expand green management to suppliers, help suppliers improve green competitiveness, give a purchasing priority to green products, and establish strategic relationship with the government and opinion leaders

### LG Chem's Mechanism for Green Management



## CORPORATE GOVERNANCE

● **LG Chem is raising corporate value based on management led by professionals and the Board of Directors, and making a decision in consideration of economy, the environment, human rights, labor and ethics in order to fulfill social responsibility.**



### Decision-Making Mechanism for Sustainability Management

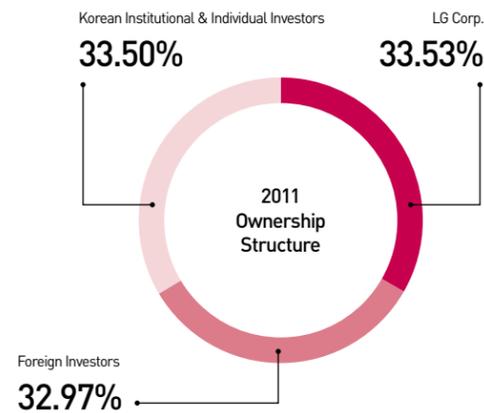
#### Decision-Making Mechanism

LG Chem makes a decision by taking into consideration various aspects of society such as the environment, human rights, work environment, ethics as well as economic aspects in order to fulfill corporate social responsibility. We have guaranteed the independency of outside directors and their voice in the decision-making process to ensure that a decision will be made in a reasonable and fair manner under the check and balance system. For decisions made in this process, we take a look into the implementation of decisions on a continuous basis in order to determine accountability for the results of the decisions and to ensure efficient use of financial and human resources. In this way, we keep track of management activities from decision-making to ex-post management, based on which we strive to fulfill corporate social responsibility.

#### Ownership Structure

The total number of shares in LG Chem (including preference share) is 73,900,021 as of late 2011. The largest shareholder is LG Corp., possessing 33.53% of total shares. Every year, the CEO makes a presentation on business status in the general meeting of shareholders, collecting opinions on major decision-making and management issues. Shareholders' opinions are deeply reviewed by the management and the Board of Directors, and then reflected in the management activities across the board. In addition, key business issues relevant to investors' interest are disclosed via DART (Data Analysis, Retrieval and Transfer System) of Financial Supervisory Service or on the websites of KRX (Korea Exchange) and LG Chem.

#### Ownership Structure



#### Status of Major Shareholders

Name	Share	Business Relation
LG Corp.	33.53%	Largest Shareholder
National Pension Service	6.80%	-
Saudi Arabian Monetary Agency	2.15%	-
The Government of Singapore	1.67%	-
Mirae Asset	1.55%	-

### Board of Directors

There are total 11 directors presently sitting on the Board at LG Chem, with six outside directors representing more than the majority. Such composition, by design, prohibits an agenda item from being approved if and when all six outside directors voice opposition to that item. Outside directors come from various fields of expertise and experience, such as law, chemistry, battery and finance. They monitor and check the management on key issues of corporate operation and take on a vital role in decision-making by presenting impartial views. To embed accountability in the management, the Board reserves the right to hold the management accountable for any behavior that goes against shareholder interest as the directors retain the authority to appoint and dismiss executive managers.

To support the Board in undertaking their role as the highest decision-making body, we have placed the board secretariat directly under the legal team to improve operating efficiency of the BOD. The secretariat reports and informs the outside directors on mid- to long-term management and current business issues on a frequent basis. Prior to a board meeting, the secretariat and concerned teams brief the outside directors on key management issues and meeting agenda so that the directors can make fully informed, detailed yet comprehensive analysis and review beforehand. In addition, outside directors are provided with as much information as possible to ensure the maximum level of work efficiency.

It is stipulated in our articles of incorporation and board regulations that any director who has special interest in a specific agenda is not allowed to vote on the agenda. Quarterly board meeting schedules for the following year are set at the end of each year and are announced to the Board after considering individual schedule needs. Additionally ad-hoc meetings are convened to respond to any urgent management issues when the need arises.

The Board members pay a visit to our plants in Korea as well as in China to gain a hands-on perspective into company operations, and newly-appointed directors are given chances to attend professional external trainings and seminars on corporate governance and the status of major business projects in order to help them get settled in their position at the earliest date possible.

#### Meetings of the BOD and Audit Committee in 2011

Category	BOD	Audit Committee
Meetings	9 times	5 times
Agenda	22 approved, 12 reported	4 approved, 11 reported
Key Agenda	<ul style="list-style-type: none"> <li>• Approval for business plans</li> <li>• Reporting of earnings performance and financial statement</li> <li>• Approval for investment plans</li> </ul>	

#### Composition of the Board of Directors

※ As of Apr. 2012

Category	Name	Year of Birth	Key Career Experience	Role
Inside Directors	Peter Bahnsuk Kim	1949	Vice-Chairman & CEO	Chairman of the Board of Directors
	Young-Soo Kwon	1957	President	Newly appointed on Mar. 16, 2012
	Jin-Soo Park	1952	President	Newly appointed on Mar. 16, 2012
	Young-Ki Park	1955	President	Newly appointed on Mar. 16, 2012
Non-Executive Director	Juno Cho	1959	President & COO of LG Corp. Director of LG Uplus, LG CNS, LG International and LG Housys	Chairperson of the Nomination Committee for Outside Directors
Outside Directors	Il-Jin Park	1947	Former Chairman of Dow Chemical Korea Chairman of IJ International Corp.	Member of the Nomination Committee for Outside Directors
	Ki-Myung Nam	1952	Former Minister of Government Legislation Visiting professor of the Law School, Chungnam National University	Chairperson of the Audit Committee
	Seung-Mo Oh	1954	Former Head of Growth Engine Project for Next Generational Battery Professor of the School of Chemical and Biological Engineering, Seoul National University	Member of the Audit Committee
	Se-Jin Kim	1956	Former Professor of Economy Department of Washington State University CEO of Korea Asset Pricing	Member of the Audit Committee and the Nomination Committee for Outside Directors
	Jang-Joo Kim	1955	Former Professor of Gwangju Institute of Science and Technology Professor of Department of Materials Science and Engineering, Seoul National University	Newly appointed on Mar. 16, 2012
	Jin-Kon Kim	1957	Fellow of The Korean Academy of Science and Technology Professor of Department of Chemical Engineering, Pohang University of Science and Technology	Newly appointed on Mar. 16, 2012

## Expertise of Outside Directors

LG Chem appoints outside directors through the Nomination Committee for Outside Directors to guarantee their independence and autonomy. The Nomination Committee, which is comprised of one inside or non-executive director and two outside directors, decides to recommend qualified candidates with expertise and impartiality, who then get formally appointed with an approval from the general meeting of the shareholders.

In order to secure expertise of outside directors, candidates for outside directors recommended are finance/accounting experts, specialists in specific areas and former CEOs, and are finally appointed to outside directors by considering comprehensively independence from other management, individual competence and global capacity.

**We are ensuring accountability in professional management system and transparency in governance through empowering the Board of Directors, thereby maximizing shareholder and corporate values.**

## Audit Committee

Audit Committee is a decision-making body that independently plans, conducts and evaluates internal audits. It is composed of legal, financial & accounting experts and specialists in specific areas, and with a view to secure transparency and independence from major shareholders and the management, all three of the committee seats are filled with outside directors, so as to ensure audits are conducted thoroughly across the management.

Apart from quarterly committee meetings, the Audit Committee deliberates on important issues in real time when they arise. Especially, the committee is briefed on quarterly earnings performance and internal audit plans beforehand and deliberates on significant points of contention, faithfully fulfilling its role as a supervisory and monitoring mechanism on the management. In addition, the committee receives a statement of accounts regularly or irregularly from external auditors who function as an independent advisor to the committee on internal monitoring. External auditors are appointed after taking into consideration their expertise, impartiality and social reputation comprehensively.

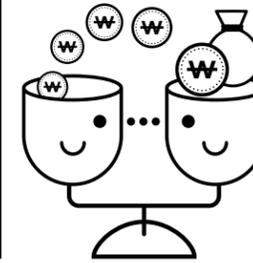
### Audit Committee's Activities in 2011

Unit: KRW million

Category	Description	Remuneration	Remarks
Audit Service	Audit and review of 2011 financial statements and consolidated financial statements	750	Total of 9,200 hours spent
Non-Audit Service	<ul style="list-style-type: none"> <li>Consulting services regarding joint venture with Kazakhstan</li> <li>Consulting services regarding China's anti-dumping, trade and acquisition</li> <li>Support and diagnosis for tax audit</li> </ul>	197	-

## RISK MANAGEMENT

- LG Chem is managing risk systematically through routine management by the risk owners, integrated management by the risk-managing organization, and supervision of the Board of Directors, and conducting ex-post management thoroughly to prevent the recurrence of same risk.



## Mechanism for Risk Management

Our risk management system has three tiers - routine management by the risk owners (1st tier); integrated management by the risk-managing organization (2nd tier); and the supervisory function of the Board of Directors (3rd tier). For integrated risk management, a dedicated risk management team provides necessary guidelines and forms for each risk, consolidates the results and reports to the Risk Management Committee (RMC). For those risks that are likely to affect our business, the team analyzes the risks in terms of size, duration and contingency scenarios if a need arises.

Our Internet portal called Elian supports up-to-date information and data for our employees and executives. For example, daily business performance (e.g., sales, production and working capital) is offered to the senior management through the Executive Information System (EIS) and market trends and reports through Global Market Intelligence (GMI) to ensure a prompt response to predicted risks.

### Follow-Up Activities for Risk Management

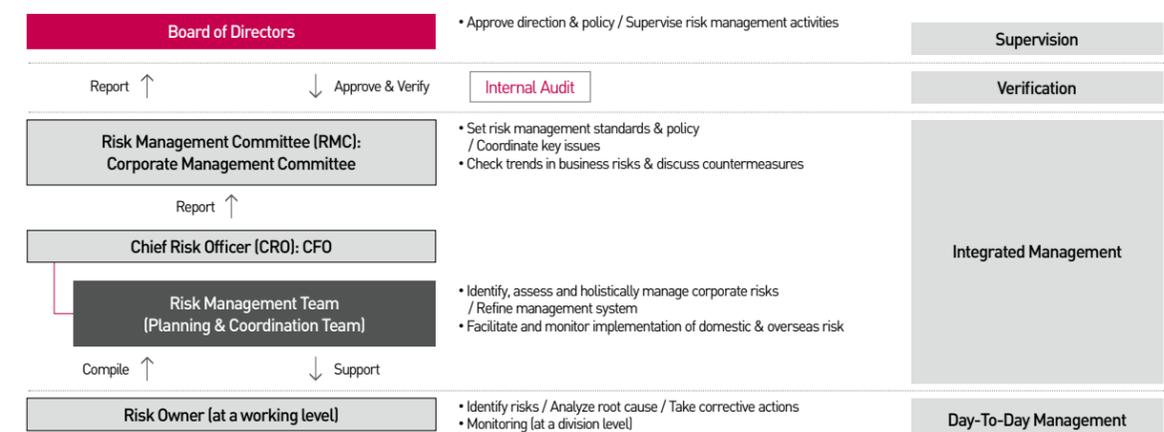
**Internal Audit** When a major risk occurs at a corporate level, we promptly conduct internal audits and take bold follow-up actions across organization when deemed necessary, to prevent recurrence of similar risks in the future.

**Infrastructure Review** We have realigned operational discretion of domestic companies and overseas subsidiaries to clarify their operational responsibilities and authorities, and raise efficiency.

**CAPEX Auditing** Regarding projects approved by the Corporate CAPEX Committee, we check investment initiatives completed within the recent three years to gauge whether they are on track in terms of sales, income and CAPEX targets and capture any deviating factors to enhance investment effectiveness. Any project whose sales, operating income, investment cost and duration come below 80% of the original plan is deemed to be off track.



### Mechanism for Risk Management



## Risk Management (RM)

### Stronger RM Activities

With the purpose of reducing total cost for risk management, LG Chem has strengthened RM activities at every location of operation since 2009 when a cross-functional team, which involves RM Team and Environment & Safety Team at the head office and Marsh Risk Consulting, was formed. RM activities have been implemented based on a three-level road map – Basic, Enhanced and High-Class Levels.

From the perspective of risk finance solution, the foundation for RM was laid in the basic level through review of insurance policy, estimation of maximum loss and analysis of business interruption. As of 2011, RM activities in the enhanced level are under way from the perspective of risk engineering solution.

### Guideline for Risk Management



Positive Application of LG Chem's Guidelines for Risk Management

Reduction in LG Chem's Total RM Cost

In the first half of 2011, we have developed and applied our own risk management guideline based on global standard codes with regard to fire protection, building, life safety and dangerous facilities in assembly plants in Ochang and Cheongju with an intention to prevent accidents and minimize risks. In the second half of 2011, we have developed and applied an optimized risk management guideline based on risk analysis and adequacy review of fire protection equipment in the petrochemical plants in Yeosu and Daesan. As part of RM activities, we are also carrying out diverse programs such as holding LG Chem RM conference, attending RIMS conference, conducting overseas benchmarking and nurturing globally competitive risk managers.

In 2012, we plan to implement enterprise risk management such as continuously carrying out RM activities in new or expanded plants, developing a risk management guideline for overseas plant, analyzing environmental pollution risk at a high-class level, performing supply chain risk management, and preparing a business continuity plan.

## Internal Control System

### Need and Significance of Internal Control

An internal control system refers to a series of activities led by the Board of Directors, top management and concerned employees to assure reasonable confidence in achieving the following three objectives: ensuring corporate operational effectiveness and efficiency; financial data reliability; and legal and policy compliance. It provides assurance on corporate financial statements to remove public distrust and elevate management accountability to earn confidence from investors. LG Chem is operating an internal control system based on the IACS standard so as to secure the reliability of financial information, and the efficiency and effectiveness of corporate management and to ensure the compliance of related laws and policies.

### The Purpose of Internal Control System



### Operation of Internal Control System

Our CEO/CFO certification project and internal control evaluation system launched in 2004 are utilized to raise the reliability of financial reporting and capture opportunities for improving our work process based on a constant emphasis on training and education. In line with the application of International Financial Reporting Standards (IFRS), we are strengthening internal control activities of overseas subsidiaries. As part of this effort, we have made an internal control system available both in English and Chinese to help local employees actively get involved in internal control activities. Evaluation results are then reported to the BOD and the Audit Committee, and get reviewed and certified by the Audit Committee and external auditors.

### Organization

Organization	Roles & Responsibilities
BOD/Audit Committee/Management	Foster an environment conducive to control, review and approve evaluation results
Internal accounting controller	Appoint CFO as an internal accounting controller in 2004 to operate the internal accounting control system
Line departments	Conduct risk assessments in team activities, design control initiatives, and execute self-diagnosis and improvement initiatives
Internal control department	Design & operate the internal accounting control system, evaluation, documentation and testing

### Ex-Post Management

Category	Description
Reporting	Audit Committee/BOD (annual), External Auditor/'Jeong-Do' Management Task Force (annual)
Feedback	Use the feedback from evaluation to facilitate improvement activities of line departments
Improvement	Improvement plans and initiatives taken to follow up on the evaluation results

## Major Risk Management Issues in 2011

Risk Category	2011 Issues	Monitoring Activities
<b>Business Risk</b> Sales & production risks	<ul style="list-style-type: none"> <li>Global economic recessions including China's retrenchment policy and financial crisis in Europe</li> <li>A recession in the IT industry and stubbornly strong value of Yen</li> </ul>	<ul style="list-style-type: none"> <li>Check &amp; respond to risks early, fast and frequently based on Speed Management</li> <li>Analyze changes in business landscape and prepare action plans when establishing mid- to long-term strategy (1H) and business plans (2H); discuss countermeasures; and develop contingency plans per scenario regarding key indicators like oil prices and exchange rate to minimize external risks</li> <li>Monitor short-term risks monthly when making a report on estimated P&amp;L over the next three months</li> <li>Discuss product-specific issues and market prospects monthly when making a report on closing accounts</li> <li>Examine business performance quarterly; discuss issues at working capital meetings on a frequent basis</li> </ul>
<b>Investment Risk</b> Changes in the business climate for target investments, cash flow risks	<ul style="list-style-type: none"> <li>Large-scale investment in new business such as LCD glass substrate and advanced automotive battery</li> </ul>	<ul style="list-style-type: none"> <li>Minimize investment risks through investment subcommittees for each business area, Corporate CAPEX Committee and corporate investment task force if needed</li> <li>Report to the Corporate Management Committee on the investment progress once every 6 months</li> <li>Use green/yellow/red to evaluate key investments after 6 months from the approval of the Corporate CAPEX Committee based on investment cost and Key Risk Indicators (KRI), and use the result as an input to interim decision making including adjustment of investment timing</li> </ul>
<b>Indirect Risks</b> Risks that need to be controlled at the staff-level, such as legal system, accounting & finance, and HR	<ul style="list-style-type: none"> <li>Rising economic uncertainty such as foreign exchange rate, oil prices and stock prices</li> <li>Recruiting and nurturing of human resources to support new business development</li> </ul>	<ul style="list-style-type: none"> <li>Through monthly corporate staff meetings, executives get together to formulate countermeasures to deal with exchange rate issues, interest rates, accounting standard changes as well as legal disputes</li> <li>In-depth discussions at monthly manager meetings chaired by the CFO (CRO), regarding management planning, accounting, finance and legal matters</li> <li>Discuss HR issues in-depth monthly through HR Development Committee</li> </ul>
<b>Non-Financial Risk</b> Risks that need to be controlled at non-financial sectors		<ul style="list-style-type: none"> <li>Formulate a loss model for each location of operation based on the results of maximum foreseeable loss review and due diligence</li> <li>Verify the performance adequacy of fire protection equipment through document review, actual test, and hydro-dynamic calculation, computer simulation as part of fire protection adequacy review for a given location of operation, and identify areas for improvement and do a cause analysis to devise actions plans</li> <li>Compare the current status of RM with the global standards based on the risk analysis of a given location of operation and discuss a plan for standard procedure for RM so as to develop our own risk management guidelines and loss control guidelines</li> </ul>

# TRACK RECORDS OF SUSTAINABILITY MANAGEMENT

LG Chem will remain committed to sustainability management. We will fulfil our social responsibility through shared growth with stakeholders while continuing to generate profit and secure new growth engines. Such goals and our commitment to them lie in economic, environmental and social achievements that we have consistently made for the past several years. Going forward, we will grow into one of the most respected companies through responsible and future-oriented decision-making and active communication with stakeholders.

Year	Sustainable Development	Major Sustainability Management Activities	Report Publication and Communication
2011~	<ul style="list-style-type: none"> <li>Build a petrochemical production base in Kazakhstan</li> <li>Completed the world's largest plant for advanced automotive battery (Ochang)</li> </ul>	<ul style="list-style-type: none"> <li>Included into DJSI Asia-Pacific (selected as Korea's Best Chemical Company)</li> <li>Introduced integrated RM management</li> <li>The First and Best Company Award by the Korean Academic Society of Business Administration</li> <li>Certified as an Excellent Company in HR Development by the government</li> <li>Hall of Fames for the Management Grand Awards for Human Resource</li> </ul>	<ul style="list-style-type: none"> <li>Published 2011 Sustainability Report in Korean, English &amp; Chinese</li> <li>Published 2010 Sustainability Report in Korean, English &amp; Chinese</li> <li>Conducted a materiality test and identified significant sustainability management issues.</li> </ul>
2010	<ul style="list-style-type: none"> <li>Announced 'LG Green 2020'</li> <li>Broke the ground for an advanced automotive battery plant in Holland, USA</li> </ul>	<ul style="list-style-type: none"> <li>Included into DJSI Asia-Pacific</li> <li>Established an ERP-based chemical substance management system</li> <li>Completed the GHG inventory for Chinese plants</li> <li>Korean Grand Prize for CSR</li> <li>The Management Grand Awards for Human Resource</li> </ul>	<ul style="list-style-type: none"> <li>Published 2009 Sustainability Report in Korean &amp; English</li> </ul>
2009	<ul style="list-style-type: none"> <li>Spin off the industrial material division into LG Housys</li> <li>Broke the ground for an advanced automotive battery plant (Ochang) and an advanced material complex (Paju)</li> </ul>	<ul style="list-style-type: none"> <li>Included into DJSI Asia-Pacific</li> <li>Got projects registered under the UN's Clean Development Mechanism and completed the GHG inventory for Korean plants</li> <li>Korea's Most Admired Companies &amp; CEO Award</li> <li>The Management Grand Awards for Human Resource</li> </ul>	<ul style="list-style-type: none"> <li>Published 2008 Sustainability Report in Korean &amp; English</li> <li>Published the summary of 2008 Sustainability Report in Korean</li> <li>Awarded a Grand Prize of Global Green Management for Sustainability Report</li> </ul>
2008	<ul style="list-style-type: none"> <li>Produced Elastomer</li> </ul>	<ul style="list-style-type: none"> <li>Pilot operation of internal credit trading</li> <li>Pilot disclosure of chemical emissions</li> <li>Launched LG Chem Community Service Group and formed a social contribution dedicated team</li> <li>The Management Grand Awards for Human Resource</li> </ul>	<ul style="list-style-type: none"> <li>Published 2007 Sustainability Report in Korean &amp; English</li> <li>Conducted a materiality test for sustainability management</li> <li>Awarded a Grand Prize of Global Green Management for Sustainability Report</li> </ul>
2007	<ul style="list-style-type: none"> <li>Acquired LG Petrochemicals</li> <li>Launched the building integrated photovoltaic (BIPV) business</li> </ul>	<ul style="list-style-type: none"> <li>Deployed a web-based GHG management system and acquired a government certification on GHG reductions</li> <li>Established a REACH compliance system</li> <li>Reduced pollutant emissions voluntarily at each plant</li> <li>Launched a Build A Library of Hope campaign</li> <li>The Management Grand Awards for Human Resource</li> </ul>	<ul style="list-style-type: none"> <li>Published 2007 Sustainability Report in Korean &amp; English for the first time</li> <li>Published 2006 Environment Report in Korean, English &amp; Chinese</li> <li>Conducted a stakeholder research of economic, environmental and social experts</li> </ul>

Year	Sustainable Development	Major Sustainability Management Activities	Report Publication and Communication
2006	<ul style="list-style-type: none"> <li>Acquired LG Daesan Petrochemical</li> </ul>	<ul style="list-style-type: none"> <li>Developed a secondary battery for HEV/high-efficiency battery/ large-capacity solar cell</li> <li>Approved as a CDM project and signed an agreement on internal emission trading system with KEMCO</li> <li>Introduced SCM that reflects environmental regulations including RoHS</li> <li>Established the guidelines to practice 'Jeong-Do' Management to ensure fair competition</li> <li>The Management Grand Awards for Human Resource</li> </ul>	<ul style="list-style-type: none"> <li>Published 2005 Environment Report in Korean &amp; English</li> </ul>
2005		<ul style="list-style-type: none"> <li>Formed a product environment task force at a corporate level</li> <li>Introduced an integrated risk management system (ERM) at a corporate level</li> <li>Built the GHG inventory for Cheongju and Ulsan plants (for the first time)</li> <li>Devised the guidelines to build eco-friendly supply chain and introduced an environmental performance evaluation system to Cheongju plant</li> <li>Designated as an excellent company with new labor-management relations (by Ministry of Labor)</li> <li>Launched a LG Chem Twin Angel Fund</li> </ul>	<ul style="list-style-type: none"> <li>Published 2004 Environment Report in Korean &amp; English</li> </ul>
2004		<ul style="list-style-type: none"> <li>Launched an employee consultative committee</li> <li>Formed a climate change task force</li> <li>Introduced a leak detection &amp; repair system</li> </ul>	<ul style="list-style-type: none"> <li>Published 2003 Environment Report in Korean &amp; English for the first time</li> </ul>
~2003	<ul style="list-style-type: none"> <li>In 2003, adopted a holding company system</li> </ul>	<ul style="list-style-type: none"> <li>2003: Revised the regulations on privacy protection</li> <li>2002: Introduced environmental accounting (calculated environmental cost and investment at each location of operation)</li> <li>1996: Rolled out a scholarship project to cultivate local talent in China</li> <li>1995: Proclaimed a 'Jeong-Do' Management, declared zero pollutant emissions</li> <li>1993: Conducted environmental Safety &amp; Health Diagnosis under the initiative of HQs</li> <li>1991: Launched an environmental safety Committee at a corporate level</li> </ul>	

## 2011 ISSUE

### Exceeded KRW 20 trillion in sales for the first time in our history

- Recorded the sales of KRW 22.676 trillion in 2011, a 16% increase from the previous year



### Completion of Advanced Automotive Battery Plant in Ochang

- The world's largest production capacity of 100,000 units a year
- Competitiveness maximization for green technology



### Signing Ceremony for LG Fair Trade and Joint Growth Agreement

- Attended by 6 LG Group companies and their suppliers and government representatives
- Put R&D cooperation and joint growth first
- Cash payment for all transactions
- Financial support and training & education



### Certified as an Excellent Company in HR Development

- A credit for LG Chem's effort on Human Respect Management given by the government



### Next Generation Battery Development Project from USABC

- Received a USD 10 million worth R&D project for high-performance advanced automotive-battery from USABC (US Advanced Battery Consortium)



# 02

## SUSTAINABILITY MANAGEMENT ACTIVITIES & PERFORMANCE

LG Chem is communicating sustainability management performance to diverse stakeholders in a transparent and interactive way in order to become a true global company who dreams of a better tomorrow.



## BUSINESS PERFORMANCE & GROWTH STRATEGY

LG Chem will expand a technology-based business portfolio in order to become a global advanced materials company.



### Economic Performance

Despite an uncertain business environment surrounding us in 2011, we made substantial achievements based on differentiated competitiveness, thereby reinforcing our position as a Global Leading Company. Built upon diversified product lines and world-best plant operation, we strengthened core business in the petrochemical area where we maintained a high profitability as well as in the IT & electronic materials area where we secured our global market leadership. At the same time, we expanded our market dominance in the advanced automotive battery business which is considered a future growth engine. Like this, we are moving forward to become a globally competitive total chemical company.

### Financial Performance in 2011

LG Chem's 2011 IFRS consolidated sales totaled KRW 22.676 trillion, a 16.5% increase year-on-year. Operating income grew by 0.5% to KRW 2.835 trillion and both sales and operating income reached a record high in our history. However, net income dropped by 1.4% year-on-year to KRW 2.170 trillion due to a decrease in gain on equity method valuation.

#### Performance Summary

Item	2010	2011
Sales	194,715	226,756
Operating Profit	28,214	28,354
Net Profit	21,998	21,697

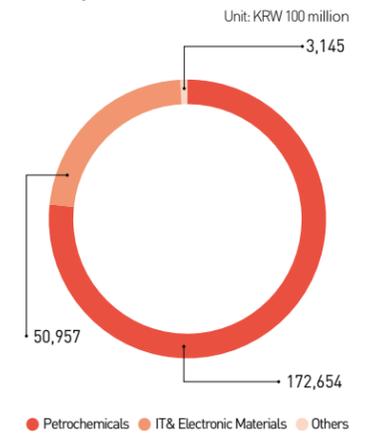
Unit: KRW 100 million

### Performance by Business

#### Petrochemicals

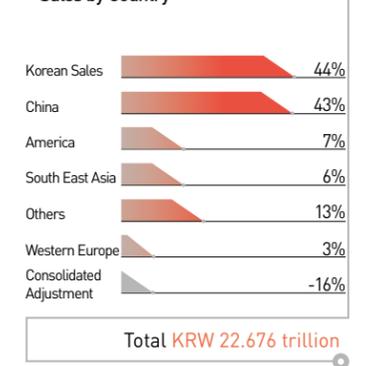
Despite a challenging business environment such as global economic recession resulting from a financial crisis in Europe and Chinese Monetary Tightening Policy, we produced stable results thanks to a diversified product portfolio and the expansion of highly profitable downstream products such as synthetic rubber and super absorbent polymer (SAP). Our product lines that range from basic raw materials such as ethylene and propylene to ABS, PVC, acrylate, synthetic rubber, oxo-alcohol and specialty products are highly profitable and diversified. In addition, we signed an MOU on building an ethane cracker in Kazakhstan which we expect will be very conducive to improving cost competitiveness.

#### Sales by Business



※ On the basis of IFRS

#### Sales by Country



※ On the basis of IFRS

# ECONOMY

#### Economic Value Creation

LG Chem is creating economic value with a vision for growth that is delivering innovative materials and technology development to improve global competitiveness of core business, and based on which to develop new future business.

We secured cost competitiveness in the NCC/PO business, mainly attributable to our cost saving drive, stronger bargaining power gained from bulk purchasing of raw materials, and best-in-class plant operation. Backed by a stable demand in the acrylates business, we expanded production of SAP, a highly profitable product, and made a good performance. In addition, we attained stable growth in the synthetic rubber business achieved due to the rising demand of the automotive industry in China and India, and BR expansion. In 2012, we will expand our production capacity mainly focusing on highly profitable specialty products such as acrylates, SAP and Bisphenol A (BPA), which will bring profitable growth to us.

#### IT & Electronic Materials

The continued weakness in IT demand forced LCD panel customers to lower their operating rate. Nonetheless, we maintained relatively strong profitability in the IT & electronic material business due to cost leadership supported by the launching of 3D FPR, operation of a super wide line for polarizers, and in-house production of raw materials. In 2012, we will concentrate on strengthening market dominance in the conventional business and commercializing new materials such as 3D FPR and OLED materials. In addition, we will strive for earlier commercial operation of LCD glass line 1 and begin investment in line 2 and 3 in the first half of 2012 with an expectation to deliver tangible results at an earliest time possible.

#### Energy Solution

We are expanding our market for mobile battery globally with the No. 1 position in global top customers. We responded proactively to market change, which enabled us to supply advanced automotive batteries to GM 'Volt' and thereby strengthen our market dominance. Now we are driving the supply of advanced automotive battery to global automotive companies such as Renault, Ford and Volvo. It is expected that our advanced automotive battery business will grow fast due to new models launched by customer companies such as Renault and Ford. Simultaneously, we will solidify our share in the customers through expanding mobile battery production with the help of a rising demand from new mobile devices such as smart phone and ultra book.

### Status of New Investment Projects and Financing in 2011

Unit: KRW million

Item	Amount
Building Expansion in Ochang	81,876
Plant Expansion for Advanced Automotive Battery in Ochang	279,369
New Investment in LCD Substrate	167,420
Plant Expansion for Optical Materials	94,141
Plant Expansion for Electronic Materials	68,783
Plant Expansion for Synthetic Rubber in Daesan	37,588
Plant Expansion for BPA in Daesan	32,088
NCC Process Improvement	133,966
Plant Expansion of SAP in Yeosu	237,893
Other Constructions and Expansions	149,864
<b>Total</b>	<b>1,282,988</b>

#### Government Support in USA and Korea

Under the Recovery Act (Aug.2009), one of the President Obama's policies to rebuild the American economy during the financial crisis in the USA, LG Chem received approximately USD 150 million of government subsidy which was half of the total construction cost of the lithium secondary battery plant in Michigan State, USA. In addition, aluminum pouch and lead tap, key components of lithium rechargeable battery were designated as 'Environmental Pollution Prevention Items' in Korea so as to get 30% of import tariff exemption.

\* Tariff Exemption for Environmental Pollution Prevention Items: For environmental pollution prevention, 30% of tariff is exempted for import items listed by the Ministry of Planning and Finance that cannot be manufactured locally.

Korea IR Award for Two Consecutive Years



#### Major Projects in 2011

- |  |
|--|
| <b>Korean Business</b>   |
| <ul style="list-style-type: none"> <li>Investment in Ochang Advanced Automotive Battery Plant</li> <li>Acquisition of LG Polycarbonate Ltd.</li> </ul> |
| <b>Overseas Business</b>   |
| <ul style="list-style-type: none"> <li>Establishment of Petrochemical Joint Venture in Kazakhstan</li> </ul>   |

## Distribution of Economic Value



Central & Local Governments

KRW **626.9** billion \* On a consolidated basis

Corporate Tax

LG Chem discloses economic value created through business activities in a transparent manner and pay part of it as a tax. We paid corporate tax of KRW 626.928 million in 2011.

KRW **14.2** trillion \* On a consolidated basis

Procurement Amount

LG Chem has maintained close relationships with suppliers via purchasing raw and sub-materials such as naphtha, EDC, TAC film, cobalt, and antioxidant. In 2011, we procured raw and sub-materials worth KRW 14,223,403 million from suppliers.



Suppliers



Employees

KRW **677.2** billion \* Scope: Korea

Total Salary

LG Chem pays salaries fairly in accordance with individual performance made based on creativity and autonomy. Total salaries which we paid to employees in 2011 amounted to KRW 677,200 million.

KRW **25.3** billion \* Scope: Korea

Donations

LG Chem is carrying out donation activities in an attempt to give economic value back to local communities. In 2011 we made donations of KRW 25,260 million to local communities and NGOs.



Local Communities



Creditors

KRW **67.1** billion \* On a consolidated basis

Interest Expense

We spent interest expense of KRW 67.1 billion, a 9.5% increase from KRW 61.3 billion recorded in 2010. Our dependency on borrowings dropped from 26.8% to 26.0% because total asset grew by 20.6% yoy.

KRW **4,000** \* On a consolidated basis

Dividend (per common stock)

LG Chem takes into consideration the size of profit, funding plans for future growth and soundness in the financial structure comprehensively in order to determine dividend payout, recognizing dividend as a basic form of returning profit to the shareholders. For fiscal year 2011, we declared a dividend of KRW 4,000 per common stock (80% of face value), same as that of previous year, and KRW 4,050 per preferred stock (81% of face value), also up KRW 500 from 2008 (14.1% increase year-on-year). Dividend payouts factored into 2011 business performance as well as future CAPEX needs for building business competitiveness and further growth in the future. With a commitment to delivering sustained shareholder value, we will maintain a dividend policy that can bring improvement to internal financial structure yet meet shareholder demands for dividend, through honing our competitive edge in core businesses and creating a stable stream of profit.



Shareholders

# Business Strategy

Based upon Speed Management, LG Chem will strive to achieve market leadership and strengthen future growth engines in all business areas so as to become a global leading company.

## Mid-to Long-Term Strategic Direction



## Petrochemicals

Built upon the vertically integrated and diversified product portfolio, we will continue profitable growth in the petrochemical business. In order to achieve a competitive scale of petrochemical business, we will nurture technology-based core business intensively and remain committed to expanding global operation in China, India, South East Asia and Europe. At the same time, we will produce competitive basic petrochemicals out of low-cost raw materials such as natural gas and shale gas and expand the weight of premium product sales so as to raise quality and cost competitiveness to the world's highest level. As part of effort to secure future growth engines, we will build up R&D capacity and materialize new business in the high-performance eco-friendly materials business so as to ensure the future orientation of business portfolio. We will also develop new catalyst and new process as a platform technology to raise our fundamental competitiveness.

## IT & Electronic Materials

LG Chem is seeking global No. 1 position in the core business to establish a future-oriented portfolio, which will create profitable growth, and expanding base technology for next generation display and green energy to prepare a future growth engine.

We are also endeavoring to respond proactively to future change. We will continue to take the lead and improve profitability in the polarizer and photoresist markets where we have ranked global No. 1. We will make additional investments to nurture LCD glass substrate and battery materials intensively into a large scale business. At the same time, in the eco-friendly materials and next generation lighting areas, we will develop new projects such as solar cell materials and OLED lighting to expand our business portfolio while securing base technology in preparation of the advent of flexible device.

Large Scale Petrochemical Production Base in Kazakhstan



Invest USD 4 billion in constructing a large scale production base as a joint venture with KPI (Kazakhstan Petrochemical Industries), Kazakhstan's government-run petrochemical company in Atyrau special economic zone in Kazakhstan

'IR52 Jang Young Shil Award'



## Energy Solution

As part of effort to reinforce our global No. 1 position, we are strengthening the profitability of the mobile battery business and expanding new business such as advanced automotive battery and energy storage system battery. To this end, we will achieve best-in class profitability in the mobile battery business, while developing a next generation battery earlier based on outstanding R&D capability in the advanced automotive battery and energy storage system battery business. In 1999, for the first time in Korea, we successfully developed a lithium-ion battery. Since then, we have achieved the sales growth of higher than 30% every year and are now ranking 1st in the advanced automotive battery business and 3rd in the mobile battery business worldwide. As of late 2011, we displayed the world's largest production capacity with the annual production of 1 billion cells of mobile battery and 20 million cells of advanced automotive battery. In the days to come, we will continue to make investment so as to lead the market.

## Chinese Subsidiaries' Business Strategy

### Overview of Chinese Subsidiaries

LG Chem made inroads into China in 1995. Since then, LG Chem has established 10 production subsidiaries and two sales subsidiaries in Tianjin, Ningbo, Guangzhou, Nanjing and Taiwan, and opened six branch offices and five liaison offices in Shanghai, Guangzhou, Shenzhen, Qingdao, Yantai, and Suzhou. As part of efforts to ensure fast growth in Chinese business, we established LG Chem China Investment Co., Ltd. as regional HQs responsible for drawing up Chinese business strategy and providing support necessary for management of Sales, Marketing and Chinese subsidiaries. LG Chem's subsidiaries in China are intent on strengthening the competitiveness of conventional business and seeking new growth opportunities. Through thoroughly localized operation, LG Chem will become a company growing with China and an exemplary company leading the Chinese market.

### Mid- To Long-Term Strategic Directions

China as an emerging economy is currently at a crossroad to transform from a factory of the world into a consumption market. The Chinese government is expected to meet many challenges and opportunities ahead such as advancing the industrial structure of Chinese market, promoting eco-friendly industries and expanding the use of new energy. In line with such efforts, LG Chem is actively responding to the Chinese government's long-term development plan and strengthening the competitiveness of conventional business. At the same time, we will nurture future-oriented and strategic new business intensively so as to become a creative leader who delivers solutions to customers.

### Strategic Directions in 2012

It is expected that uncertainty will grow in the Chinese market in 2012 due to worsening export and demand resulting from the financial crisis in Europe and sluggish economic recovery in the USA, a recession and expanding oversupply in the property and infrastructure construction market. However, urbanization and domestic market promotion continuously driven by the Chinese government will expand sales market and speed up consumption growth in China. LG Chem will respond promptly to such changes in the Chinese market and explore constantly new business areas with a focus on the blue ocean market which is expected to have premium and green needs.

Awarded 'Corporation of the Year' by GM

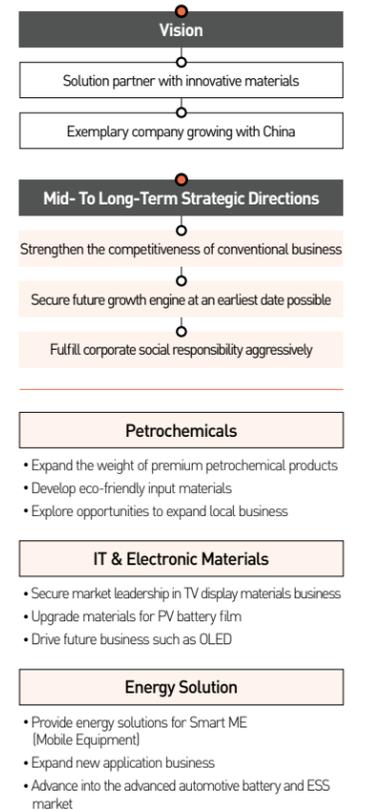


Recognized as World's Best in terms of technology and quality as well as supply capacity (On March 11, 2011)

### Status of Chinese Subsidiaries



### Chinese Subsidiaries' Business Strategy



# TECHNOLOGY INNOVATION PERFORMANCE

Technology innovation activities built upon innovative materials serve as a strong foundation as well as a growth engine for LG Chem to grow into a global leading company.



## Value Creation through Technology Leadership

LG Chem is actively intent on R&D activities to secure competitiveness of existing business based on innovative materials and technology, while building on that platform, to realize the vision of creating new businesses for the future. Our business structure, which was originally centered on petrochemicals and industrial materials, has diversified to include IT & electronic materials, such as polarizers, and rechargeable batteries, where R&D provided a needed thrust for the business from the late 1990s.

### Development of Eco-Friendly/High-Performance Materials and New Processes/New Catalysts

LG Chem concentrates on innovating technology to secure the competitiveness of the petrochemical business, developing eco-friendly high-performance materials to secure platform technology, and improving R&D and application of new process/catalyst. In particular, our focus is on developing carbon nanotube, the new dream material of the 21st century as well as eco-friendly biomass materials which are based on natural feedstock, rather than petrochemicals.

### LCD Glass Substrate

LCD glass substrate is one of the most state-of-the-art products because it requires surface quality with ultra high flatness and high heat resistance to go through a thin filming process. LG Chem embarked on the LCD glass substrate business in 2009 and started its commercial operation in 2011. Based on stabilized production, we will sell LCD glass substrate to global customers starting from 2012.

**R&D on High Energy-Efficiency Products & Eco-Friendly Materials**



**High Energy-Efficiency Products**

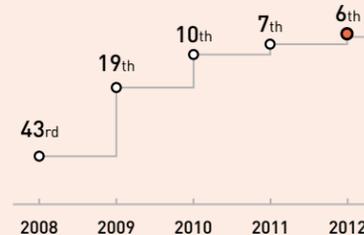
Develop high-performance high-rigidity materials and secure processing technology in order to make final products slim and light so as to help end users reduce energy consumption.

**Eco-Friendly Materials**

Continue to replace petrochemical feedstock with recyclable feedstock such as vegetation and CO<sub>2</sub> in order to develop eco-friendly materials

#### LG Chem's Outcome of Technology Innovation

As of February 17, 2012, LG Chem was ranked 6th among 165 chemical companies in the Patent Scorecard. The Patent Board™ produces a Patent Scorecard™ that ranks companies on patent quality, technological strength and breadth of impact. It tracks the United States and European Patent Office patent portfolios of more than 2,700 of the world's top technology firms. The Patent Board's metrics reflect varying aspects of innovation, speed, strength and relevancy. In just five years, our ranking was jumped 70 notches from 75th in 2007, which means that we have already reached the world's highest level in technology innovation.



### OLED Technology

In preparation for the post LCD era, LG Chem is continuously working on new business such as OLED and solar cell. We plan to expand the OLED display business to include OLED materials, OLED polarizers, and materials for flexible device. There are still new opportunities in the lighting market; to this end, we have completed our pilot investment project and are making preparations to produce products on a full scale.

### 3D FPR Commercialization and Advanced Material Development

LG Chem, equipped with core technologies, is strengthening the fundamental competitiveness of the existing business such as polarizers and photoresists and expanding into new business area in order to secure growth engines. In 2010, we commercialized 3D Film Patterned Retarder (FPR) technology for the first time in the world. This technology delivers flicker-free, as well as brighter 3D visuals compared to that of competitors. Our R&D activities built upon a precise coating technology and other base technologies will lead to tangible outcome in the material areas for rechargeable battery, touch panel and solar cell. In addition to the existing solar cell back sheet, we are developing an organic solar cell and other materials technologies with an intention to find out new business opportunities. Going forward, we will strive to deliver new customer value by improving existing base technology and developing new platform technology.

### Battery Technology

Among lithium battery manufacturers worldwide, LG Chem is the only chemical company that also manufactures batteries. We have developed new products proactively based on innovative material technologies, which enables us to have the first mover's advantage in the new market. Currently, we provide batteries for various purposes such as laptop, mobile phone, tablet PC, electric vehicles and smart grid to serve customers around the world.

**Technology Innovation to Improve Conventional Business**

- Continue to develop premium products
- Secure the best quality and strengthen cost competitiveness

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**Technology Development to Secure Future Growth Engine**

- Speed up R&D of eco-friendly high-performance materials
- Continue to explore new growth engines such as new process/new catalyst

Item	Description
<b>Advanced Automotive Battery</b>	Thanks to excellence in core materials, LG Chem produces higher performance advanced automotive battery compared with competitors. We possess home-grown technologies to produce a safety reinforced separator (SRS) and a lithium-ion polymer battery which are considered best-in-class in terms of high-capacity/high-output as well as safety. Currently, we concentrate R&D efforts on developing a next generation advanced automotive battery which will provide electric vehicles with a longer driving distance per charge. LG Chem is nurturing the advanced automotive battery business as a growth engine with a target of more than 25% of global market share in 2015. Going forward, we will continue to expand our market in Europe, Japan and China, and reinforce our leadership in the advanced automotive battery market.
<b>Energy Storage Battery</b>	Our energy storage battery was highly valued when we participated in four projects in Jeju in 2009 and provided a household energy storage system to SCE, the largest power company in California, USA in 2010. Built upon excellent battery & BMS technologies and production capability, we will put the energy storage battery business in another global No. 1 position by 2015.
<b>Mobile Battery</b>	Lithium-ion batteries (mainly either cylindrical or prismatic type) are widely used for portable media device such as laptop, camcorder, mobile phone, and tablet PC due to no memory effect, high-energy density & operating voltage and excellent charge retention. Thanks to development of materials technology, the lithium-ion battery is also used for non-IT device such as power tools and e-bike. We applied our patented technology called Stack & Folding Structure to lithium-ion polymer batteries which are used for smart phones and tablet PCs. The technology is superior to that of competitors in terms of energy density and stability, and is expected to be widely applied to new device like ultra-thin notebooks.
<b>Additional Technology Development</b>	We are committed to R&D to develop a next generation battery built upon our excellence in battery materials so as to widen a gap with competitors. To this end, we will concentrate on developing high-capacity electrode materials and new concept innovative battery.



# ENVIRONMENT

## Greenovation

LG Chem's Greenovation is to practice Green Management under the principle of 'Respecting Human Dignity' in order to contribute to clean environment and enriched lives. To this end, LG Chem delivers eco-friendly materials and solutions to customers.



# ENVIRONMENT & SAFETY MANAGEMENT PERFORMANCE

The goal which LG Chem has always pursued is to contribute to creating a cleaner world where current and future generations prosper together.

## Environment & Safety

Built upon the Green Management philosophy and environment & safety regulations, LG Chem is carrying out diverse programs such as Environment & Safety Management System, Corporate RC Committee and safety training to ensure environment preservation and business safety.

### Environment & Safety Vision

LG Chem has established an environment & safety vision to manage environment & safety in the workplace and to seek the balance between business activities and environment & safety continuously.

#### Environment & Safety Vision

Goal	Seek the balance between business activities and environment & safety continuously		
Vision	Strengthen Competitiveness and Execution Power of Environment & Safety		
Core Tasks	Continue to improve the environment	Manage environment & safety risks	Secure absolute safety
	<ul style="list-style-type: none"> <li>Reduce pollutant emissions</li> <li>Respond to regulatory trends proactively</li> <li>Improve work environment continuously</li> </ul>	<ul style="list-style-type: none"> <li>Expand a monitoring system</li> <li>Examine and improve risks for each process</li> <li>Build up capacity to respond proactively</li> </ul>	<ul style="list-style-type: none"> <li>Innovate safety awareness</li> <li>Secure safety of process equipment</li> <li>Secure worker safety</li> </ul>
Mission	Strengthen Competitiveness and Execution Power of Work Safety		

### Environment & Safety Management System

Based on management principles, corporate environment management regulations and safety health management regulations, the guidelines for environment & safety are prepared at every location of operation. Environment & safety issues such as environment management, risk assessment, environment & safety training and emergency response are taken into consideration in the entire management process, and environment & safety management systems such as ISO 14001, OHSAS 18001 and KOSHA 18001 are introduced and in operation to ensure continuous improvement.

#### LG Chem's Environment Philosophy

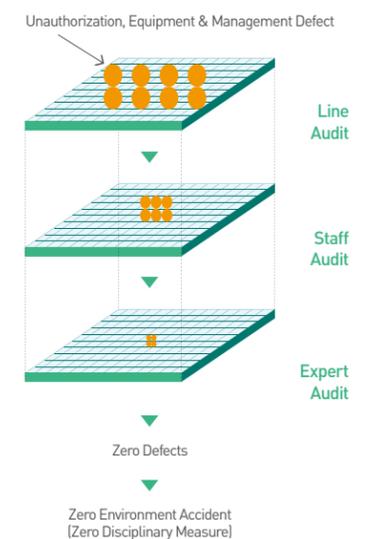
##### Article 1 [ 4 ]

• LG strives to maintain and advance the free market economy, make a contribution to local communities, and preserve the environment through performing business activities with a strong sense of responsibility and self-awareness as a corporate citizen.

##### Article 6 [ 4 ]

• LG strives to prevent environmental pollution and protect the nature in order to preserve the clean environment.

#### Framework for Environment & Safety Audit



For more efficient and better performance, we are operating an integrated environment & safety system based on Responsible Care (RC) which is a voluntary sustainability program for chemical companies. A performance evaluation based on the Environmental Performance Index (EPI) is conducted for each plant and the evaluation results are taken into consideration for rewarding high-performing teams and setting plant MBOs. Furthermore, a specific annual plan for internal & external audits on environment & safety are put in place at each location of operation in an effort to complete the mechanism for environment & safety management in a more systematic way.

#### Environmental Performance Index

The Environmental Performance Index (EPI) is a method of quantifying environmental management performance so as to accomplish environmental goals.

Core Business	EPI		KPI
	Item	Description	
Continuous Environment Improvement	Reduce Pollutants	Pollutant Emission Reduction Waste Water Wastes TRI Air Pollution CO <sub>2</sub>	<ul style="list-style-type: none"> <li>Achievement of voluntary agreement</li> <li>Achievement of GHG reduction target</li> </ul>
	Proactive Response to Regulations at Home and Abroad	Execute Environment Improvement Plan	<ul style="list-style-type: none"> <li>Response to new/revised regulations</li> <li>Management of environmental equipment risks</li> </ul>
	Proactive Response to Regulations at Home and Abroad	Improve Environment Management System Zero Legal Incompliance	<ul style="list-style-type: none"> <li>Internal Audit Results</li> <li>Line Audit Execution Rate</li> <li>Staff Audit (Finding/Improvement of Legal Incompliance)</li> <li>Efficiency check on the Environments &amp; Safety Management System</li> <li>Removal of legal incompliance</li> <li>Management of environmental accident risks</li> </ul>

#### Responsible Care (RC)

LG Chem has a 'Corporate RC Committee' in operation which is an environment & safety management consultative body to fully implement RC at a company-wide level. The RC committee is involved in deciding major policies regarding the environment, safety, health and energy, analyzing and evaluating RC activities and performance, sharing major issues and information, and distributing best practices in an attempt to proactively respond to demands for improving environment, safety and energy. By doing so, the committee plays a critical role in environment and safety management of LG Chem.

#### Responsible Care Activities

Committee	Roles & Responsibilities
Plant RC Committee	<ul style="list-style-type: none"> <li>Discuss key issues in environment &amp; safety, review and approve preventive actions, finalize action plans for commonly-applicable environment &amp; safety, review introduction of best practices</li> </ul>
Unit Plant RC Committee	<ul style="list-style-type: none"> <li>Discuss plant-specific issues in environment &amp; safety (goals and direction, performance and plans, events, safe work procedures, voluntary controls)</li> <li>Discuss problems and improvement areas for facilities, share information and implement practices confirmed by RC Committee, discuss other environment &amp; safety-related proposals and improvement</li> </ul>
RC Working Committee	<ul style="list-style-type: none"> <li>Develop action plans for common issues, collect input on environment &amp; safety, discuss support for environment &amp; safety including accident prevention, trends analysis and information delivery</li> </ul>

#### Environment & Safety Training

A yearly training plan both for employees and suppliers are prepared and implemented at every location of operation. Introductory Course, Basic Course and Expert Course are provided depending on titles and jobs of employees. In particular, we are strengthening our training on safety management regulations, emergency evacuation directions, and safety measures by job type in order to ensure safety of the visitors from our suppliers.

#### Flow of Environment & Safety Management System



#### RESPONSIBLE CARE

- ISO 14001
- OHSAS 18001
- KOSHA 18001
- Eco-Friendly Company
- Voluntary Agreement

#### Self-Assessment on RC



## Environment & Safety Activities by Plant

LG Chem is carrying out diverse activities to prevent environment & safety accidents and minimize pollutant emissions at every location of operation.

### Continuous Environment Improvement

#### LG DAGU Environment & Safety Team's Innovation Activities

LG DAGU has improved its waste water treatment system in response to stricter environmental regulations in China due to water resource shortage. As a result, LG DAGU reused organic waste water 100% and saved industrial water cost.

#### Activities

- » Acquired advanced environment technologies and gathered related data from home and abroad since 2008
- » Renovated the existing environment facility into the waste treatment facility suitable for production conditions and conducted on-site inspection for waste water recycling
- » Analyzed bottlenecks and difficulties for waste water treatment, adjusted the coefficient of waste water stripper, replaced outdated filters

#### Outcomes

- » Discharged zero organic waste water which led to a reduction in COD concentration of discharged water and the cost saving of USD 567,000 a year
- » Reduced water consumption
- » Received government incentives and selected as an excellent environment protection company in the petrochemical & chemical industry in the 11th five-year plan



#### Daesan Plant Removal of Odor from the WWT facility

The working environment has been improved by removing complex odor generated in the process of decomposing spent caustic, lavatory waste, hydrocarbon and organics from the waste water treatment (WWT) facility.

#### Activities

- » Measured odor and monitored the inflow of hydrocarbon
- » Prepare improvement plans by the source or type of odor
- » Identify three action items: Improve facilities, change operating parameters, and make an investment
  - \* Put up a cover onto a digestion tank to make the inflow of odor into the BTF
  - \* Increased a recovery rate by sizing up a recovery pipe of dissolved air floatation (DAF) facility
  - \* Brought up microbes and checked the differential pressure of BTF based on the predefined checklist

#### Outcomes

- » Improved working environment due to the successful removal of odor using a digestion tank cover
- » Secured cost leadership from the recovery and sales of hydrocarbon



### Iksan Plant Replacement of RTO

The existing RTO (Regenerative Thermal Oxidizer) was replaced with new one in response to current and potential buildup of production capacity.

#### Activities

- » Invested KRW 450 million to replace a 2-bed RTO with the capacity of 50N $m^3$ /min with a rotary-type RTO with the capacity of 75N $m^3$ /min in July 2011

#### Outcomes

- » Secured allowable discharge concentration in line with production capacity buildup
- » Enabled to reduce discharge concentration below 50% of allowable limit



## Environment Cleanup

### Naju and Iksan Plants River Cleanup Campaign

Cleanup campaigns were conducted to revive River Naju and Mankyung Reservoir.

#### Activities

- » The Community Service Group of Naju Plant worked with local environment groups to clean up the area adjacent to River Naju
- » As part of Campaign One Plant to One River, employees at Iksan Plant cleaned up the area adjacent to Mankyung Reservoir and encouraged local residents to separate garbage



#### Outcomes

- » Improved the environment adjacent to River Naju
- » Improved the environment adjacent to Mankyung Reservoir
- » Raised the awareness of local residents on environmental protection



## Environment Management Support

### Ochang Plant Environmental Technology Consulting for SMEs

Provided environmental technology consulting service to small-and mid-size enterprises (SMEs) that lack expertise.

#### Activities

- » Visited 28 waste transportation and treatment companies working with Ochang Plant (two times in 2011)
- » Provided support on waste disposal methods and treatment technology

#### Outcomes

- » Improved the efficiency of waste disposal
- » Reduced air pollutant
- » Promoted environment accident inspection and reduced environment accident rate
- » Devised a plan for waste water recycling and energy reduction



## Environment & Safety Risk Management

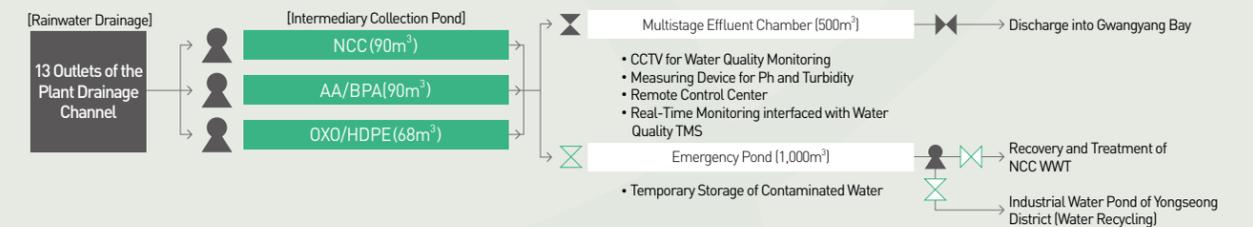
### Yeosu Plant Operation of Emergency Storage System

#### Activities

- » Invested KRW 1.4 billion in building an emergency storage system to strengthen an emergency response process for non-point sources of water quality degradation
  - » Operation scheme for emergency storage system (Yongseong District)
- An emergency storage tank has been installed to respond proactively to ever-stricter government regulations as well as to strengthen the emergency response capability to prevent river and ocean pollution

\* Investment amount: KRW 1.4 billion

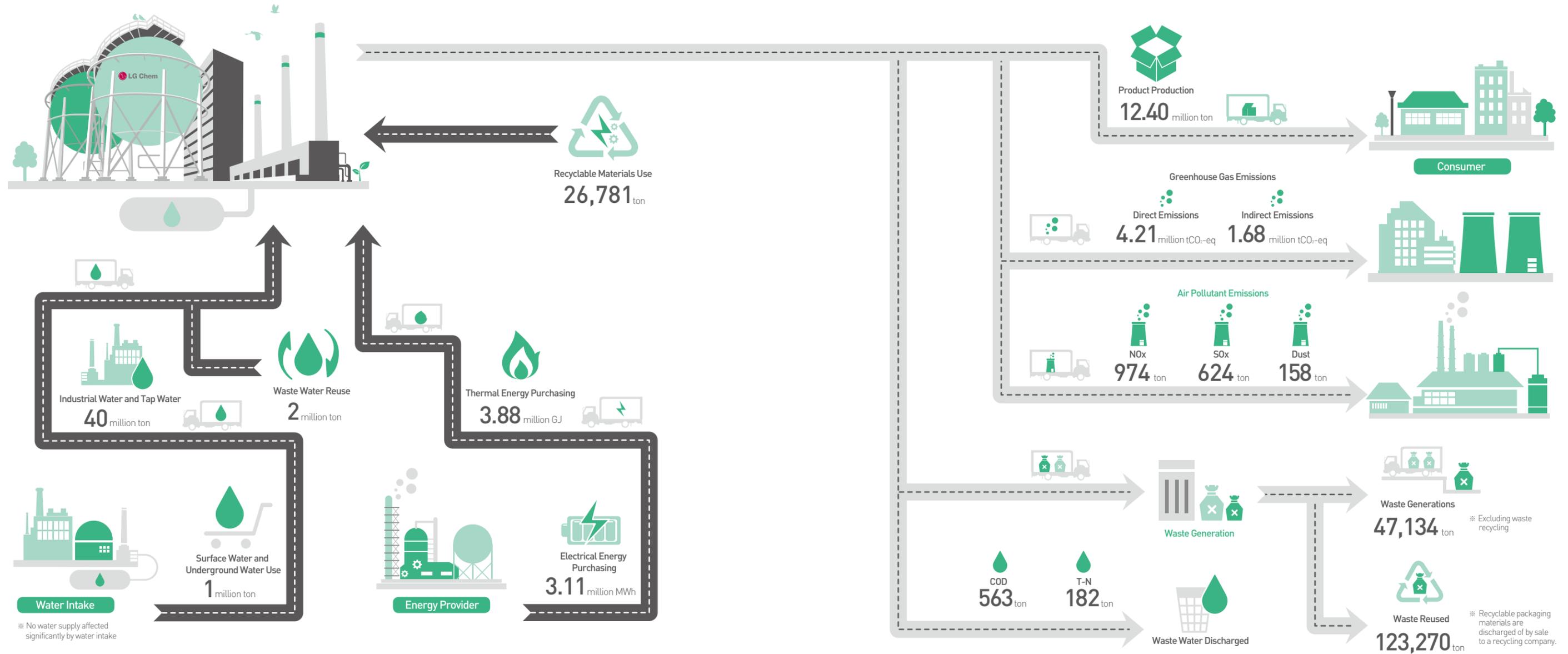
\* Investment period: Sep. 2011 to Jan. 2012



#### Outcomes

- » Strengthened the emergency response capability for river and ocean pollution
- » Prevent unexpected pollution accidents
- » Proactive respond to ever-stricter government regulations

## Green Management Performance



※ Scope: Korean locations of operation (in 2011)



### Resource/Recycling

LG Chem continues to reduce its resource use by preventing pollutions throughout the entire lifecycle, from raw material input to production and reusing or recycling the wastes generated.



### Wastes

Our waste management policy is intended to secure Cost Leadership through continued activities to add value to the waste generated with an emphasis on treatment safety. Actions to reduce waste generation from the generation source are taken at each location of operation.



### Water

With a goal to reduce water pollutant emissions, we apply control targets for water quality at our location of operation and reinforce our monitoring efforts on increasingly stringent regulations. A process to reuse waste water has been introduced at each plant, helping reduce the amount of water used, thereby generating less waste water and water pollutants.



### Air

We have reduced air pollutants from the generation source through changing a process, replacing raw and sub-materials, and making air pollutants generated be treated at a prevention facility.



### Soil

LG Chem maintains soil-contaminating facilities strictly from its installation to decommissioning in line with our internal guidelines on soil pollution control.



### Hazardous Chemicals

LG Chem thoroughly controls hazardous chemicals from the receipt to use and disposal. Thanks to scientific discharge management based on Toxics Release Inventory (TRI), we have reduced hazardous chemicals and toxic materials every year.

# RESPONSE TO CLIMATE CHANGE

Green Management is a way forward to proactively address climate change and minimize business impact from a changing energy landscape. That is why we are pressing ahead with greenhouse gas reduction and energy usage reduction as our top management priority at LG Chem.



## Vision

We are moving forward with Green Management to make contributions to the nation and society by minimizing the environment impact of our business activities across the board and strengthening green products and business.

Green Management enables us to respond to climate change issues and contribute to eco-friendly green growth, thereby achieving sustainable growth. As part of Green Management, we are improving process energy efficiency and preparing & executing a mid-to long-term greenhouse gas (GHG) reduction plan to reduce GHG emissions directly. At the same time, we are working actively to produce high value-added products and to make a transition to the low energy consuming structure in an effort to reduce GHG emission indirectly.

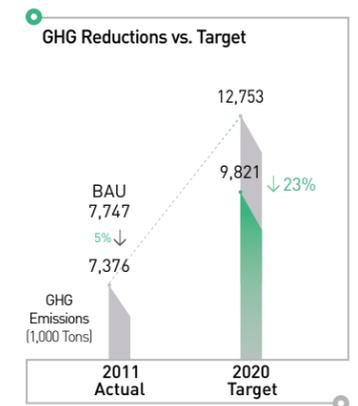
### Vision for GHG Reduction

Vision	No.1 Greenovation Company		
Goal	Reducing Cost, Easing Regulation, Establishing Eco-Friendly Process		
Role	<b>Head Office</b> Function as a channel for exchanging information Develop strategy regarding GHG, energy and water	<b>Plants (Including Overseas)</b> Develop technology regarding GHG, energy and water Conduct abatement activities	
Directions	Maximum efficiency of energy use	Structural transition to low energy-consumption	Enhancement of energy management technology
Action Plans	Process Innovation Production process innovation Energy saving task force Energy-efficient climate	Restructuring Enhancement of value added product Investment in new energy-efficient facilities Transition to low-energy consuming products	Optimization Management Development of mid- to long-term energy plans Technical support for energy saving Efficiency enhancement of energy management
Target	GHG	Energy	Water

## Strategy and Goal

Systematic and strategic response to climate change is very significant in the process to develop a business plan to hedge against the risk incurred from diverse regulations and carbon market creation. With this in mind, the Environment/Climate Change Team at head office analyzes risks and opportunities from climate change at home and abroad and if needed, incorporates the analytical results in the process to develop strategies for GHG reduction, carbon credit acquisition and green product development in consultation with business divisions and concerned teams. This process allows business divisions to respond to climate change risks more efficiently and to make the most of business opportunities from climate change.

Built upon Green Management, we plan to reduce our emissions by 23% from the BAU by 2020. To this end, we will monitor actual reductions against plan every year and analyze potential reductions by division while developing green technology by 2020.



※ Scope: Korean and Overseas locations of operation

### Target for Greenhouse Gas Reduction

- Reduce GHG emissions by 23% from the BAU level by 2020

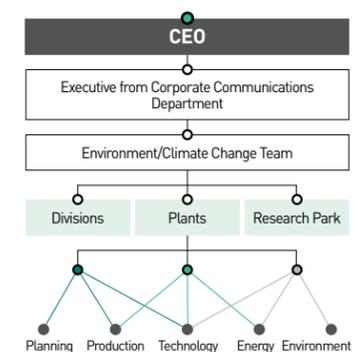
### Action Plans

- Monitor actual reductions against plan every year by 2020
- Analyze potential reductions by division and develop green technology

## Organizational Structure

Environment/Climate Change Team directly reporting to the CEO at head office has been in operation to cope with climate change in a systematic manner. Environment/Climate Change Team is responsible for formulating a strategy to respond to regulations at home and abroad, preparing a mid-to long-term plan for GHG-energy reduction, and analyzing risks and opportunities from climate change. Climate change managers are also designated at each plant, charged with collecting, compiling and reporting information and data on GHG emission sources and emission activities along with developing GHG reduction projects. Research Park takes responsibilities for carbon-LCA (Life Cycle Assessment) which is an analysis of GHG emissions along the life cycle of products from production to disposal, not to mention R&D on new GHG reduction technology.

### Organizational Chart to Respond to Convention on Climate Change



※ One climate change manager for each division and plant

### Kick-Off Meeting of Task Force for Response to GHG Regulations



Discussed a way to respond to GHG-Energy Target Management System and developed a reduction project [Held on March 17, 2011]

## Risks and Opportunities

Global climate change regulations and Korea's GHG-Energy Target Management System present us both risks and opportunities. Regulatory risks are inherent in 'Emission Trading' and 'Carbon Tax', however, business opportunities can be found such as high-efficiency energy products, new renewable energy, and trading of emissions acquired from GHG reduction projects. Such opportunity factors are accelerating our efforts to advance into the rechargeable battery market and solar cell materials business as well as develop GHG reduction technology continuously.

## Management of Energy Usage and GHG Emissions

An energy usage plan is prepared annually and its implementation is monitored monthly. Since 2007, an integrated GHG management system has been in operation to control GHG emissions which come from direct sources from fixed combustions facilities, transportation, manufacturing process and fugitive sources; and indirect sources from power and steam. Furthermore, GHG emissions from electric power/steam purchased are calculated and the use of ozone-layer destroying substitutes are also controlled and totaled up by plant.

## GHG Reduction Projects and Performance

In line with Green Management, we set a reduction target by 2020 and follow up on the performance of reduction projects. In order to achieve a GHG reduction target, plants are actively engaged in process innovation activities while business divisions are making transition to the low energy consuming structure. Emission reductions are registered with National Center for Greenhouse Gas Inventory & Research to get certified by the government. The emission reductions are calculated based on the comparison before and after projects and reviewed by the third-party. In 2011, we achieved a total of 230,000 ton of certified emission reductions (CERs).

### 2011 GHG Reduction Projects

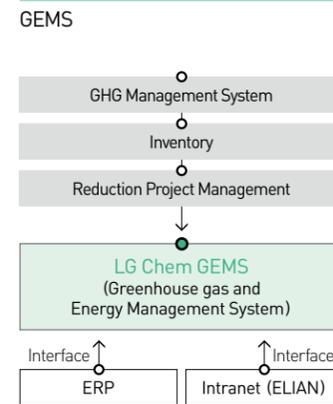
Plant	Project Name	Reductions(tCO <sub>2</sub> /year)
Yeosu NCC	Recovery of GTG hot air	4,203
Yeosu PVC	Steam reduction due to concentration system	3,002
Yeosu VCM	Introduction of Zero Gap Cell for an electrolyzer	6,836
Ochang Optical	Fuel reduction due to RTO concentrator	2,774
Cheongju IT Film	Energy usage due to a modified air conditioning method	240

## In-house Emissions Trading

With an emissions trading system to be introduced in Korea in the near future, LG Chem should be prepared to attend the trading market so as to achieve a reduction target in a cost-effective way. With this in mind, we signed a memorandum of understanding (MOU) with the Ministry of Knowledge Economy in February 2006 to set up an internal emissions trading system, and have since run an in-house emissions trading system over the last three years till 2009. Backed by operating experience and expertise obtained, we established the GHG inventory at five plants in China and conducted third-party verification and certification in 2010. Our Korean and Chinese plants traded emissions two times in July and November, 2011.

## Participation of Smart Grid Pilot Project

LG Chem is actively involved in the smart grid pilot project in Korea which is intended to raise the efficiency of power use. For example, we have participated in projects 'Smart Renewable', and 'Smart Transportation', and 'Smart Home' going on in the Jeju Smart Grid Test Bed since 2009. Likewise, we are working hard to develop smart grid technology fit for Korean situation.



Internal Emission Trading between Korean and Chinese Plants



## Procurement of Eco-Friendly Vehicle

As part of voluntary efforts to reduce GHG emissions, Ochang plant has been expanding the procurement of electric or hybrid vehicles. Ochang plant has run 2000cc electric vehicle Volt powered by a battery that we produced for a test purpose and electric vehicle CT&T for a logistical purpose. Ochang plant also purchased 1600cc Avante Hybrid, 1600cc Forte Hybrid and 2000cc Sonata Hybrid additionally to replace company vehicles. By running electric and hybrid vehicles, we are reducing gasoline consumptions as well as CO<sub>2</sub> emissions from company vehicles.

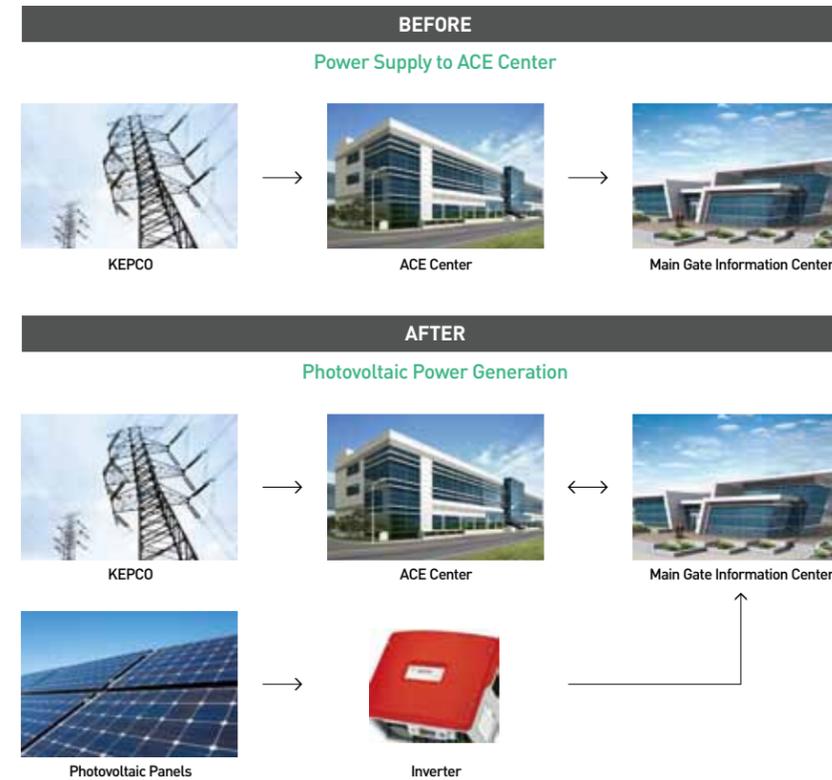
Electric Vehicles used in LG Chem



## Installation of Photovoltaic Power Generation System

We installed a photovoltaic power generation system in Ochang plant with a view to contribute to a low carbon green growth and create a green plant. Photovoltaic power is one of clean energy sources which requires no fuel and emits no GHG. In April 2011, we installed a photovoltaic power system in the parking area adjacent to the main gate of Ochang Plant, which powers some lights in the main gate information center and ACE center. Through this system, we reduced approximately 19.6tCO<sub>2</sub> of GHG a year.

### Photovoltaic Power Generation in Ochang Plant



Parking Area Adjacent to Ochang Plant Main Gate



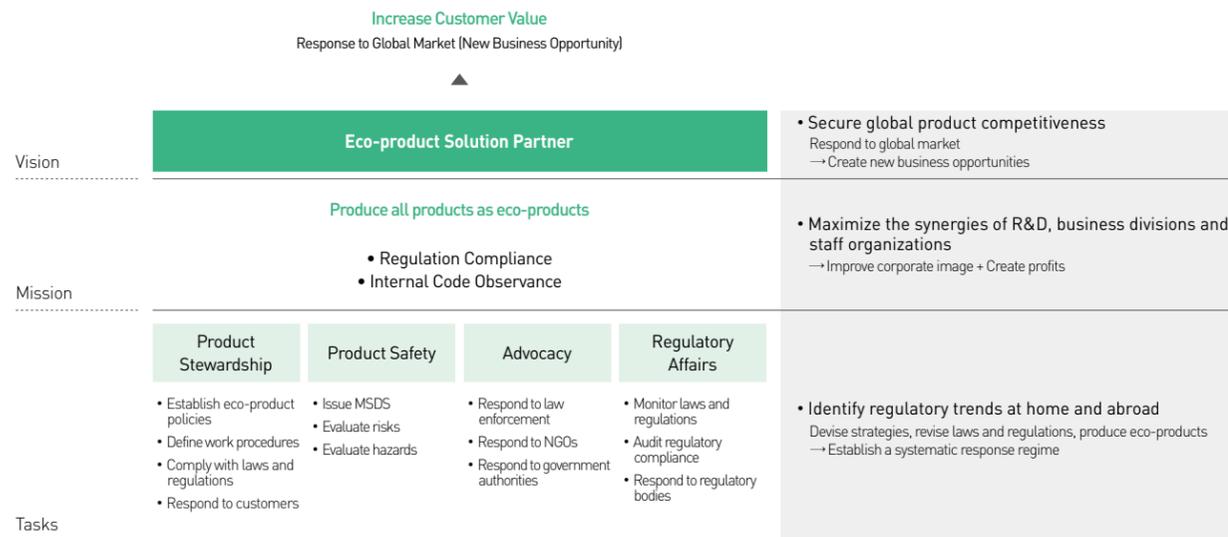
# ENVIRONMENTAL STEWARDSHIP OF PRODUCTS

We are proactively ensuring the environmental soundness of products through planning and evaluation based on environmental sustainability along the product life cycle so as to increase customer value.



## Environmental Vision for Products

We provide our business divisions and stakeholders with effective and valuable solutions from the environmental and economic aspects of the entire production process from R&D to disposal so as to contribute to increasing customer value.



\* Eco-Product Solution Partner (Eco=Ecology+Economy): A partner who provides business divisions and stakeholders with solutions which are effective and valuable from the aspects of environment and economy across the entire product lifecycle from R&D to disposal



## Eco-Product Development

### Eco-Design Process

Our eco-design process enables us to analyze and understand environmental impacts of our products throughout its entire lifecycle from development, raw material purchase to production, use and disposal. The use of heavy metal substances are banned by the internal regulation on development of eco-products, and substances listed in the REACH SVHC (Substances of Very High Concern) are selected and the presence or amount of the substances in our products are declared and controlled proactively.

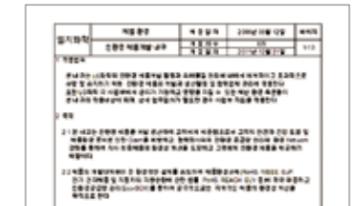
### Eco-Friendly Certification System

Since 2006, we have established the guidelines for LG Chem eco-friendly certification system and operated an eco-friendly certification system to proactively respond to product and environmental regulations at home and abroad including Restriction of Hazardous Substances Directive (RoHS) and Registration, Evaluation, Authorization and restriction of CHemicals (REACH). Moreover, we have trained and audited our suppliers to minimize risks of hazardous substances getting into the products in the supply chain.

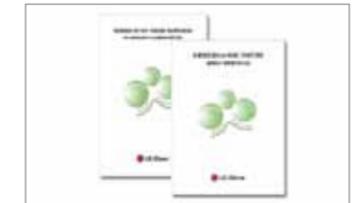
### Green Procurement

As an eco-product manufacturer, LG Chem is taking the initiative to develop technology to ensure the environmental sustainability of products as well as to spread the use of eco-products. At the same time, as a sound corporate consumer, we have implemented the industry's voluntary agreement on green procurement that we signed with the Ministry of Environment in 2005, contributing to the spread of sustainable consumption culture.

Internal Regulation on Development of Eco-Products



Guideline for Eco-Friendly Certification



\* It can be downloaded at <http://open.lgchem.com>.

2011 Green Procurement Performance by Industry

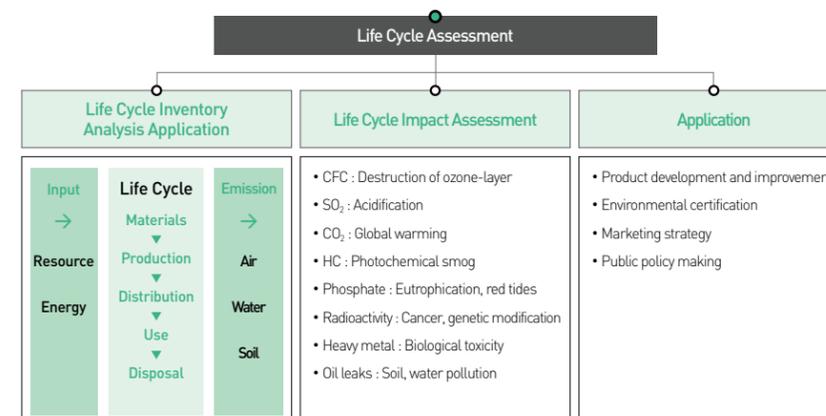


## Assessment on Environmental Sustainability in Products

### Life Cycle Assessment (LCA)

With a view to improve environmental sustainability of our products, we quantify the input of resources and energy, and the emission of pollutants in the lifecycle of a product through LCA and analyze and evaluate their impact on the environment.

### Life Cycle Assessment



### Hazardous Material Test & Analysis

The Corporate R&D Center at the LG Chem Research Park takes charge of analyzing hazardous Substances in our raw materials and finished products to gauge the level of environmental soundness of our products. Our analysis and assessment activities are as follows:

#### Eco-friendly Test & Analysis

Category	Description
Operation of an ISO 17025 authorized testing laboratory	<ul style="list-style-type: none"> <li>Analysis on six RoHS regulated substances (Cd, Pb, Hg, Cr(VI), PBBs/PBDEs)</li> <li>Analysis on halogen free (Br, Cl)</li> <li>HBCDD, 9 types Phthalates (DMP, DEP, DIBP, DNBP, BBP, DEHP, DNOP, DINP, DIDP)</li> <li>Additional analysis on regulated substances if requested by clients (non-RoHS heavy substances)</li> <li>Number of certificates of analysis: 955 reports issued</li> </ul>
TVOC assessments	<ul style="list-style-type: none"> <li>Assessment on TVOC and FA in materials, processes and products.</li> <li>Individual VOC study (P&amp;T, headspace, TD)-Eco-product/material assessment: IT&amp;E materials/automobiles/building substances</li> </ul>
Accreditation as an authorized testing body	<ul style="list-style-type: none"> <li>Dec. 20, 2005 Accredited as KOLAS international testing facility-TVOC/FA, Cd (EN1122) standard</li> <li>April 25, 2007 TÜV RoHS recognized lab- Six hazardous RoHS substances (Cd, Pb, Hg, Cr(VI), PBBs/PBDEs)</li> <li>May 1, 2008 TÜV scope extension-Halogen free (Br, Cl)</li> <li>Sept. 2, 2008 KOLAS scope extension-Six hazardous RoHS substances (self-analysis method)</li> <li>Jun. 2009 TÜV scope extension-Six hazardous RoHS substances (IEC62321:2008), HBCDD, 3 types of phthalates (DBP/BBP/DEHP)</li> <li>Jun. 2010 KOLAS scope extension-Six hazardous RoHS substances (IEC62312: 2008)</li> <li>Aug. 2011 KOLAS scope extension-Halogen Free (Br, Cl)-(KSMD180:2009)</li> <li>Feb. 2012 scope extension-9 types of phthalates (DMP, DEP, DIBP, DNBP, BBP, DEHP, DNOP, DINP, DIDP)</li> </ul>

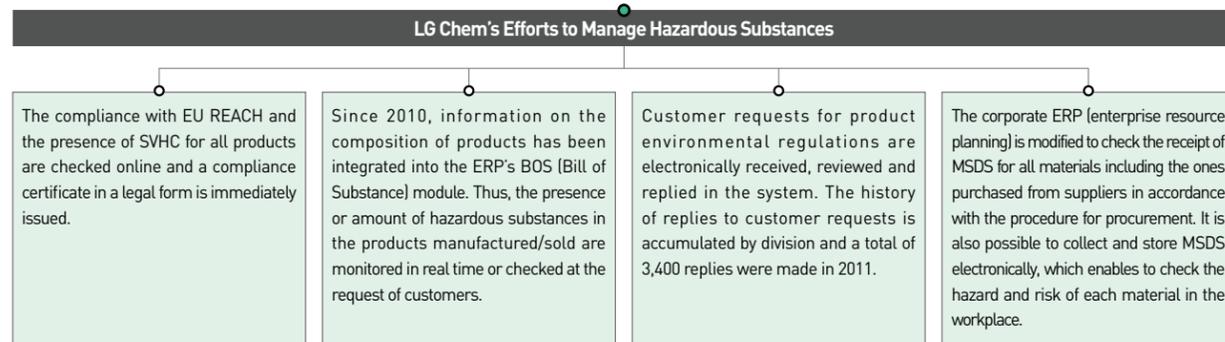
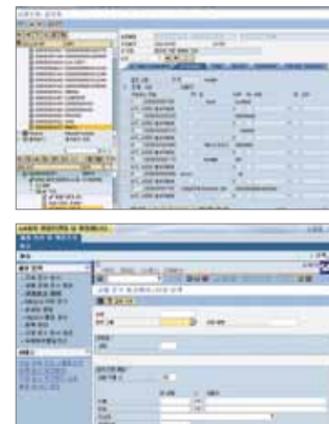
## Establishment of Chemical Substance Management System

### Chemical Information Management System

LG Chem deployed an ERP-based system called CHARMS (Chemical Assurance and Regulation Management System), which has been intensively utilized to guarantee the compliance with environmental regulations and to check if any hazardous substances are contained in our products since 2010. CHARMS has evolved from a tool to contain information on the presence and amount of substances to an information management system to collect and handle diverse information including the property and toxicity of substances. Thanks to the system, we have made a remarkable progress in managing our response to product environmental regulations systematically.

In 2011, we conducted a large-scale project to integrate information on the physico-chemical properties, health hazards and eco-toxicity of approximately 900 chemical substances into the system, which made it possible to check online all information on chemical substances used in the company. In addition, the Search or Statistics menu of CHARMS using the vast amount of data in it can be used to select and control substances of concern. Backed by the system, LG Chem is capable of responding to environmental demands of diverse markets strategically and promptly.

CHARMS



Since not only scientific and technical information, but also information on laws and regulations on chemical substances is available in CHARMS, a module to manage legal response taken by environment & safety managers such as declarations and submission of documents regard to chemical substances has been added to CHARMS.

Armed with this integrated system, we are able to manage all the information on chemical substances such as basic property, regulatory check and actions to be taken in real time. One step further, in late 2011, we added another module to generate MSDS in accordance with GHS (Globally Harmonized System) and translate it into multi-languages automatically in CHARMS to provide direct support to customers in diverse markets.

The extended chemical substance management system enables LG Chem to ensure the environmental soundness of products in all areas from production to customer service. In addition, we are able to build up our capability to predict the trend of chemical substance management earlier than competitors, respond to customer request for product environmental sustainability faster than competitors and check the compliance with environment regulations more frequently than competitors.

### Environmental Stewardship from the Raw Material Procurement Stage

Since 2008, LG Chem has been conducting material composition surveys with an intention to share information on the composition of materials in the supply chain so as to ensure the environmental stewardship of products from the procurement stage. In particular, in 2010, the material composition survey was conducted for all materials purchased and the results were integrated into CHARMS, making it possible to work in close collaboration in supply chain. Driven by the success, we conducted the material composition survey for all materials purchased again in 2011 to improve the quality and quantity of information.

In 2011, a module to check the composition of materials for environmental soundness was added to the ERP system so that the environmental soundness check should be done as part of procurement activities. By doing so, we have ruled out the possibility of inflow of raw materials that may raise concerns over environmental regulation. This system also helps concerned teams and suppliers take strong ownership of hazardous substance management and environmental regulation response, contributing to the enhancement of understanding throughout the supply chain and the market.

One step further, in late 2011, we introduced the web-based material composition survey system which is interfaced with our procurement system called OPEN to support suppliers in handling information more quickly and addressing security concerns. It is expected that suppliers and concerned teams of LG Chem in the supply chain will gather and share environmental information of all raw materials to be purchased in real time starting from 2012.

This new attempt is an innovative solution for LG Chem to deal with ever-increasing regulatory cost and complexity resulting from the growing demand for environmental regulations in an efficient way.

LG Chem's Material Composition Survey Sheet



Presentation on LG Chem's Response to Chemical Substance Regulations



Attended by representatives from 330 suppliers at home and abroad (Held on March 10, 2011)



# SOCIETY

## Communication and Accountability

LG Chem is pursuing shared growth based on 'Jeong-Do' Management, respecting creativity and autonomy to cultivate global talent, and carrying out social contribution activities to realize social value through communication and accountability.

# PRODUCT LIABILITY AND CUSTOMER VALUE ACTIVITIES

LG Chem spares no effort to secure the safety and reliability of products and deliver innovative materials and solutions so as to grow with customers.



## Product Liability

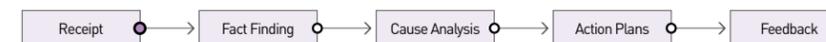
The fundamental corporate responsibility is to provide safe products to customers. To this end, LG Chem is going all out to secure the safety and reliability of products across the entire development process.

### Practice of Product Liability

**Product Safety Management System** We set a management target and carry out diverse improvement activities to guarantee the safety of products and technologies and to meet ethical obligations. Customer requests are received via diverse channels such as 080 call, website and sales representatives, and the hotline is also available to customers to ensure that customer requests are promptly delivered to us.

VOCs (Voice of Customers) are addressed as part of the 'Solution Partner' activities which is our customer contact service to improve customer value. VOCs received are immediately transferred to concerned teams, and actions to be taken and the timeline for the actions are shared with customers. Then, a cause analysis is conducted and reviewed, which is delivered to customers in a format requested by the company or customers within the appointed date. KPIs such as feedback time are defined to manage these activities so as to raise customer satisfaction.

### Process to Address VOCs

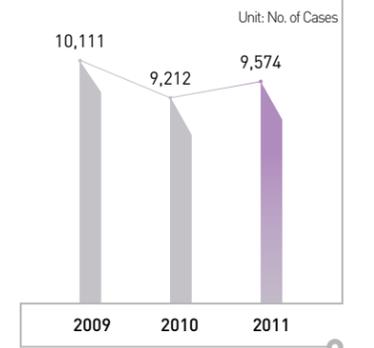


The manual to address VOCs is put in place and followed by quality managers as well as employees in sales, marketing and production. Issues identified are discussed at a regular quality meeting. If issues are significant or likely to occur again or customers make a request for improvement, action plans are prepared and its implementation is closely monitored.

### Process to Improve Quality



Status of VOCs Receipt (080 Call, Website)  
Unit: No. of Cases



### VOCs Handling System



### Operation Manual for Quality Management System

**International Standard Certification and Product Liability Insurance** LG Chem updated MSDS in accordance with GHS (Globally Harmonized System of Classification and Labeling of Chemicals) in July 2010, and is also proceeding with other international standard certifications such as issue of Certificate of Origin, Authorized Economic Operator (AEO) and ISO Quality Management Systems. As an institutional support for product liability, we have a product liability insurance policy which covers any bodily or property damage resulting from the defect of our product at home and abroad. As such, we strive hard to provide safe and sustainable products and services to customers.

## Customer Value Innovation

Our vision of 'Growing with Customers' guides our actions in delivering innovative materials and solutions for our customers.

### Defining the Way We Work - Focus on Market and Customer

We strive to bring a customer and market orientation in the way we think and work. That is why we first try to identify what value it is that our customers desire to have. Customer value enhancement begins with understanding the customers - the environment they are in, the issues they find difficult to solve by themselves and the value they seek to attain. Such customer insights can clearly direct us in developing and delivering differentiated materials and solutions that reflect customer value. This customer-oriented approach helps us bring success in customer business and gain their trust for our value offerings.

### Our Unique Value Proposition

Various function units at LG Chem, from sales, R&D and manufacturing to technical service, are brought together as one team to create greater value for customers. Such a consolidated team structure enables a broad and in-depth understanding of customer issues and needs, and thus ensures effective and timely solutions for customer value creation. Moreover, a wide variety of services and troubleshooting solutions to meet diverse business needs of our customers are available. Our business companies interact directly with the customers to identify their current requirements as well as to explore potential needs.

### Customer Satisfaction Survey

LG Chem annually surveys our customers on their satisfaction with our customer interface activities and reflects their voice into our business strategy and customer policy-making. Customer seminars and other activities are carried out as well. The customer satisfaction survey is commissioned to a specialized research firm to ensure the objectivity and impartiality in the process.

#### Customer Satisfaction Survey

Year	Score
2008	80.0
2009	80.1
2010	81.8
2011	81.2

※ On a scale of 100

#### GHS-Based MSDS



#### ISO 9001



#### TS 16949



#### Frost & Sullivan Korea Excellence Award



Selected as 'This Year's Advanced Automotive Battery Manufacturer'

#### Nokia Supplier Award 'Best Quality'



Selected as the 'Best Quality Supplier'

## Information Security

LG Chem is providing education programs to Information Protection Consultative Committee and employees on a regular basis to protect key information safely.

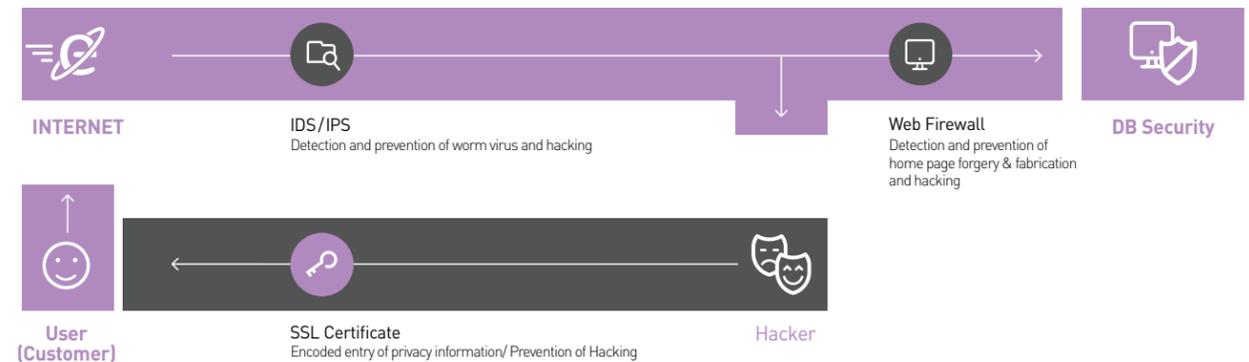
### Information Protection and Software Compliance

In 2010, we revised information protection regulations, which had been enacted in 2003, after taking into consideration recent requirements in a bid to abide by and respond to new or revised laws and regulations systematically. To ensure efficient distribution of the revised regulations, we reorganized information protection organizations at a corporate level and are running an Information Protection Consultative Committee to strengthen execution power. On top of them, we acquired an AEO (Authorized Economic Operator) certificate by meeting the AEO requirements to prevent information leakage which may occur at the entry and exit of personnel, vehicles and goods at each location of operation, and provide education on privacy protection to employees on a regular basis as part of our efforts to protect key information on our company and customers. In addition, we applied a system for DB encoding and DB access control to eliminate the possibility of a customer information leakage accident which is emerging as one of the major social issues, and there have not been any cases of leakage of customer information so far. Besides internal information protection activities, LG Chem introduced a company-wide software check system as part of software compliance activities for ever-intensifying copyright. We are also encouraging employees to check software installed in their office computers on a regular basis while raising their awareness of copyright.

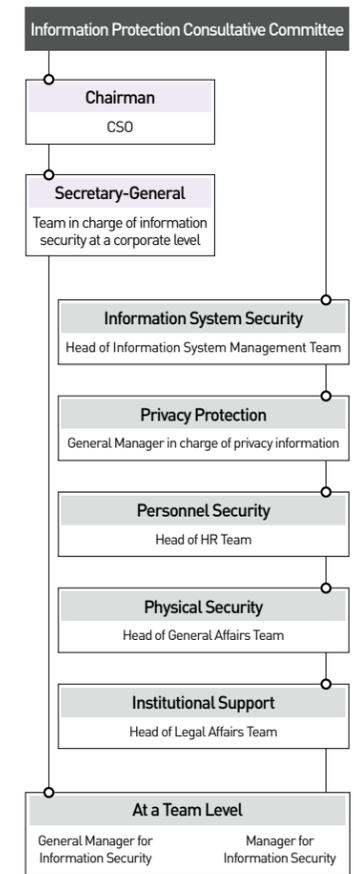
### Information Security Training

Type	Scope	Description	Period
Online	All employees	Information security policy, control scope, accident cases	Annually
Offline	New employees	Information security policy, system, control scope	As needed
Offline	Key system operators	Weakness analysis & countermeasures	Biannually
Offline	Employees at each plant	Information security issues & accident cases	Annually

### Security System



### Information Protection Consultative Committee



# BUSINESS PARTNERSHIP

LG Chem selects suppliers in a fair and transparent process and implements five shared growth tasks in a faithful manner so as to become a great business partner.



## Partnership with Suppliers

LG Chem selects suppliers on a transparent manner and conducts a fair evaluation of suppliers by using our own procurement system, called OPEN, and a credit rating system.

### Selection and Evaluation of Suppliers

**Registration and Selection of Suppliers via OPEN** We open contracts to all suppliers, select new suppliers transparently, evaluate existing suppliers fairly and differentiate the operation of suppliers based on evaluation results. To this end, we have operated an Open Purchasing Electronic Network (OPEN). In order to improve accessibility and openness of new suppliers, any suppliers who want to start trading with LG Chem are allowed to apply for registration on LG Chem website (<http://www.lgchem.com>). The application for new registration is determined based on the results of self-evaluation by applicants for the convenience of suppliers.

**Management and Operation of Suppliers through Fair Evaluation System** On top of technical and financial status, applicants are evaluated in terms of compliance with environmental, safety and labor laws and regulations such as RoHS and REACH, and execution of ethical management, and then finally registered as a supplier when they meet our requirements. Afterwards, we conduct evaluation periodically to support, nurture or discontinue suppliers. Additionally, the risk of new and existing suppliers is proactively managed in connection with a credit rating system in a bid to secure supply stability.

Supplier evaluation is fairly conducted after prior notification via a Supplier Evaluation System, which is a part of OPEN, and evaluation results are provided to suppliers. Every year, excellent suppliers are selected based on the evaluation results and given incentives.

### Procurement Rules



※ Compliance with environmental, safety and labor laws and regulations is described in Article 9 (Audit on Suppliers) and Article 16 (Suspension and Discontinuation of Trading) of the guideline for management of suppliers.

### Flow for Selection & Evaluation of Suppliers



**Localization to Support Suppliers** LG Chem, by the nature of business, has a high ratio of overseas procurement. However, in the rechargeable battery business, LG Chem has supported local suppliers in localizing key raw materials such as cathode materials and separators, and manufacturing equipment, thereby raising the ratio of local procurement. Going forward, we will keep expanding supplier support through localization with an intention to improve the competitiveness of Korean suppliers and to pursue shared growth with suppliers.

## Shared Growth with Suppliers

Under the order of fair trade established based on 'Jeong-Do' Management, LG Chem has provided long-term and substantial support to suppliers to grow their business. LG Chem has continuously pursued shared growth policy with a view to fulfill corporate social responsibility and to build trust-based long-term partnership with suppliers so as to create a win-win situation. Furthermore, LG Chem is expanding shared growth activities for secondary and tertiary suppliers to improve their competitiveness given that they also play a role as one of pillars in shared growth.

### Shared Growth Initiative Committee

LG Chem recognizes that for further growth, it is essential to help suppliers secure competitiveness. With this in mind, we have a Shared Growth Initiative Committee in place to pursue shared growth with suppliers in an effective and substantial manner. The Committee is chaired by CFO and composed of 9 executives as from 2010. The Committee is convened on a regular basis to select, monitor and take follow-up actions regarding five tasks for shared growth.

### Agreement on Shared Growth and Fair Trade

LG Chem is the first chemical company to sign an Agreement on Shared Growth and Fair Trade for Large and Small- and Middle-sized Enterprises in November 2008. We signed the agreement in September 2010 and April 2011 again to ensure our commitment to shared growth.

### Stronger Environmental Management of Suppliers

We guide suppliers to prevent possible environmental issue at their site and to cope with global environmental regulations as an eco-friendly company. As part of this effort, we checked REACH-relevant substances contained in materials that we purchase from suppliers in 2010. Furthermore, we conducted a survey on chemical compositions of purchased materials using CHARMS and obtained basic information necessary for dealing with environmental regulations, making it possible to respond to environment-related requirements of customers more systematically. We plan to provide training and education to suppliers on a regular basis given that partnership with suppliers is necessary to proactively cope with global environmental regulations

CEO's Visit to a Supplier Named Leechem



Supplier Plant Manager Meeting



### Five Tasks for Shared Growth

Declaration of Top Management's Commitment	Expansion of Financial Support and Improvement of Payment Term	Technical Support for Strengthening Technology	Training Support in Cultivating Human Resources	Establishment of Partnership for Shared Growth
<ul style="list-style-type: none"> <li>Operation of Shared Growth Dedicated Team</li> <li>Expansion of Visit to Supplier Sites</li> </ul>	<ul style="list-style-type: none"> <li>Creation of KRW 30.0 billion of LG Win-Win Fund</li> <li>100% cash payment to subcontractors and logistics suppliers</li> <li>Improvement of payment term for non-subcontract SMEs: Payment within 60 days</li> <li>Encouragement of primary suppliers to apply same payment term to secondary suppliers</li> </ul>	<ul style="list-style-type: none"> <li>Suppliers' involvement in green projects</li> <li>Support to suppliers for problem resolution</li> <li>Technology &amp; quality improvement activities and free support for analysis and test</li> </ul>	<ul style="list-style-type: none"> <li>Support to suppliers for technical training including operation of Polymer Processing School</li> <li>Foundation of Supplier HR Development Team at LG Academy</li> </ul>	<ul style="list-style-type: none"> <li>Expansion of localization of part materials &amp; equipment, joint advance into overseas markets</li> <li>Prior notification of raw materials price to plastic suppliers</li> <li>Compliance with subcontracting laws: prohibition of unfair discounting and verbal PO, stricter procedures to request technical documents including cost calculation sheet and unilateral on-site audit</li> <li>Regular meeting with or between suppliers</li> </ul>

## Fair Trade

LG Chem rules out all possible expedient means for pursuing short-term outcome only, such as unfair business practice and violation of competition rules. We engage in fair trade to foster longer-term, sustainable competitiveness. To this end, we are operating a compliance program based on strong commitment of top management. Recently, we are carrying out activities to establish and spread a fair trade and shared growth culture with customers and suppliers as well as fair trade with competitors.

## Compliance Program for Fair Trade

The Compliance Program (CP) for Fair Trade is our internal system to ensure organizational compliance with fair trade laws. The program takes a proactive approach to prevent legal violation through employee trainings on guidelines for conduct and relevant laws and regulations, while detecting and redressing the problems early on through periodic internal audits. LG Chem has been running its own compliance program since 1995, and after entrenching all 7 elements of the compliance program recommended by the Fair Trade Commission, along with our CEO's declaration of his commitment to compliance, we became formally registered with the Korea Fair Competition Federation in 2002 as a company that operates a compliance program. Additionally, with the declaration of 'Fair Competition Practical Guideline' in 2006 for the first time in Korea, specific behavioral guidelines were presented to abide by fair trade laws and regulations. At the same time, disciplinary measures against employees who commit violation were put in place in order to put teeth into the internal system to prevent violations.

### Organization

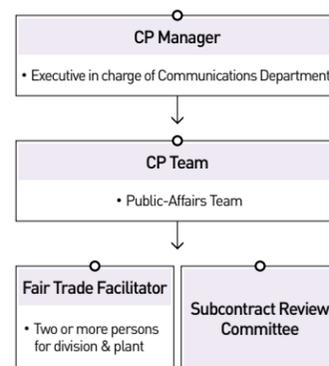
To operate the Compliance Program efficiently and effectively, we have placed a compliance team under an executive-level CP Manager to take on the responsibility of planning and implementing the program and reporting to the BOD. In addition, two or more fair trade facilitators are designated for each location of operation, which means more than 40 fair trade facilitators are rigorously making sure no violation of fair trade takes place at LG Chem. Moreover, to promote fairness in subcontracting with small- and mid-size suppliers, we run an internal subcontract review committee to preliminarily screen any subcontract transaction over a certain amount to check for legitimacy.

### Performance of the Compliance Program

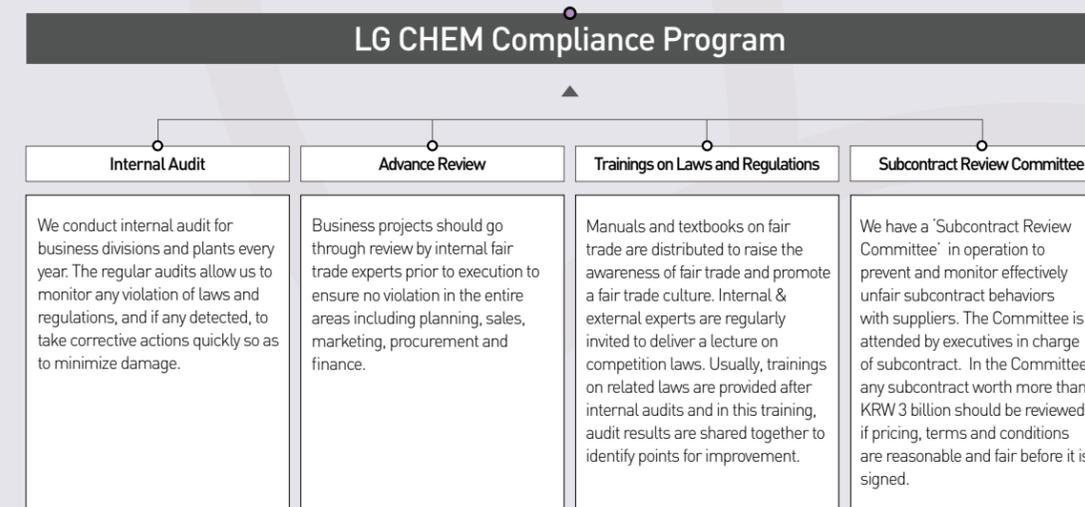
In 2011, internal audits and trainings pertaining to the Fair Trade Act and the Fair Subcontract Act were carried out across business divisions and plants. A special focus was placed on the prevention of cartel in the sales area. On the purchasing front, checks were conducted to identify any violation of the Fair Subcontract Act, such as 'Determining Unreasonable Subcontracting Prices' and to monitor effective implementation of 'The Fair Subcontract Agreement'. In addition, fair trade facilitators are designated for each business division and each plant to promote a fair trade culture and to ensure early detection and self-correction of unfair trading behaviors.

\* As of April 2012, LG Chem is involved in one pending administrative litigation regarding violation of the Fair Trade Act. We will continue to make efforts to prevent violations.

### Fair Trade Compliance Organization



## LG Chem Compliance Program for Fair Trade



## Performance in Compliance Program

Year	Frequency	Description
2007	10 times	• Focused on audits and trainings on the prevention of cartel
2008	13 times	• Audits of overseas sales team and trainings given at Chinese and Japanese locations of operation with the focus on the prevention of international cartel • Signed a fair subcontracting agreement with 280 SMEs
2009	7 times	• Designated fair trade manager at each division or plant • Check the compliance of Fair Subcontract Agreement
2010	10 times	• Trainings on the prevention of international cartel • Laid the foundation for win-win and shared growth with SMEs • Classroom education for fair trade facilitators
2011	9 times	• Higher quality education for cartel prevention • Dissemination of obligations & prohibitions following the revised Fair Subcontract Act

※ Counted based on the number of divisions given audits and trainings.  
[However, classroom educations attended from multiple divisions are counted as one time.]

# TALENT MANAGEMENT & WELFARE

LG Chem guarantees fair evaluation & compensation and diverse welfare benefits in accordance with the human resource principles respecting individual creativity and autonomy while striving to cultivate global talent.



## LG Chem's Ideal Employee

LG Chem defines the ideal employees as 'those who have commitment to LG Way and capability to get it done,' based on which we are employing and cultivating human resources.

## Human Resource Principles

For realizing human respect management, one of the management philosophies of LG Way, we set up the principles of human resource which guide us to respect diversity of employees, value creativity and autonomy based on individual strengths, and encourage individuals to develop their potential and create performance to the fullest possible.

We employee talent around the world regardless of race, nationality and gender and offer a fair opportunity regardless of religion, disability, geography and association. The highest compensation is provided to the highest performer through fair evaluation. In compliance with the Labor Standards Law, we abide by the ban on child labor, prohibiting children working under the age of 15, and the ban on forced labor that forbids the employer from forcing labor against the free will of the workers.

### Highest Capability, Highest Performance, Highest Compensation

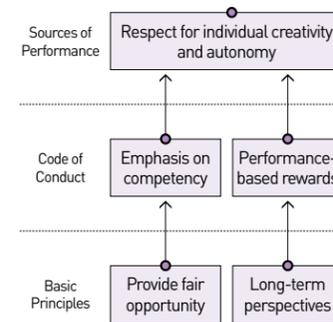
HIGHEST CAPABILITY	HIGHEST PERFORMANCE	HIGHEST COMPENSATION
<p>We hire talent from all around the world, regardless of race, nationality and gender.</p> <ul style="list-style-type: none"> <li>Recruit people with creativity and unique individuality</li> <li>Job placement with consideration for individual preference and aptitude</li> <li>Offer incentives to core talent, based on their market value and business impact</li> </ul>	<p>We present top talent with challenging tasks and broader training opportunities to develop them into core human resources, based on fair and objective evaluation.</p> <ul style="list-style-type: none"> <li>Objective and impartial evaluation system</li> <li>Systematic training opportunities for each level and skill.</li> <li>One-on-one career development session/ Well-devised career development system</li> </ul>	<p>We provide the highest compensation to top talent regardless of race, nationality, gender, religion, disability, geography and association.</p> <ul style="list-style-type: none"> <li>Annual salary system linked to individual skills and performance</li> <li>Substantial rewards on performance, e.g., profit sharing</li> <li>Fast track promotion system</li> </ul>

### Our People

Employees with Both Conviction and Executive Ability toward LG Way

- Challenging the world's best with dream and passion
- Building teamwork and working with creativity and autonomy
- Giving first priority to customers and innovating for value creation continuously
- Competing with fairness based on sustainable competitive edge

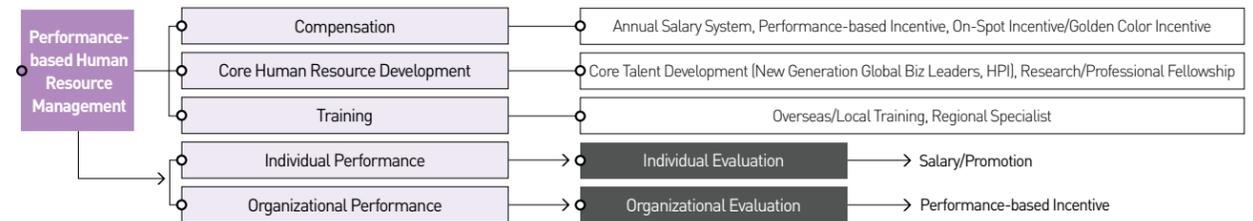
### HR Principles



## Performance-Based Rewards

LG Chem guarantees fair opportunities to our employees so that they can generate performance based on their individual creativity and autonomy. We provide competitive pay and benefits on the basis of performance under the principles of HR management. In addition, we are in pursuit of performance system valuing the quality of performance and the process of creating performance in addition to the financial outcome.

### Performance-Based HR Management



## HR Development Program

LG Chem announces major directions for training and education and establishes the annual plan and budget every year. Diverse training programs necessary for improving job skills and self-development are contributing to maximizing the capability of employees.

### Developing Core Talent for Business Success

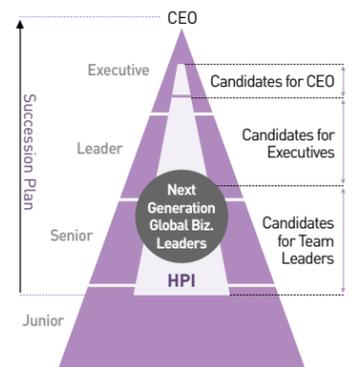
We attempt to discover high potential individuals (HPI) and Next Generation Global Business Leaders as early as possible to nurture them into core human talents. They are given opportunities to develop management skill, foreign language ability, and leadership as well as job skills under the Career Development Program (CDP) which is customized to each individual.

### Developing Talent for Global Operation

We focus on deepening global organizational competency to remain competitive. That is why we adopted a global approach towards educating our people. We have developed targeted education programs for those who contact directly with our global customers, so that they can familiarize themselves with work process and business etiquettes that are aligned with global standards.

With a view to promote the use of English as our official language at LG Chem, we are expanding the use of English during important business meetings. In particular, our intensive and advanced business English programs allow our employees to deepen their communication skills. In addition, we send our employees to renowned universities in Korea and overseas to nurture them into global thinkers and strategists to lead our key business areas, and also run 'Regional Specialist Programs' (focusing on strategic target regions such as China, India, Brazil, Russia and the Middle East).

### Core Talent Development Associated with Succession Plan



Executive level: 3 candidates for one position at a level of head of business division

Team leader / Overseas major post: 2 candidates for one position at a level of team leader or key overseas position

### Research / Professional Fellowship

Research/Professional Fellowship is to provide vision and compensation for top-level researchers and professionals of each area to have job security while creating a work environment where they are engaged in their work with a goal to improve future capability.

## HR Development Program

### Mandatory Program

#### LG Academy's Mandatory Course



#### LG Chem's Mandatory Course



### Job Competency Training

Sales/Marketing	Production	R&D	Finance
<ul style="list-style-type: none"> <li>Basic skills (4 courses)</li> <li>Global business skills (5 courses)</li> <li>Understanding of business divisions and products (by division)</li> </ul>	<ul style="list-style-type: none"> <li>Battery Academy (43 courses)</li> <li>IT &amp; Electronic Optical Academy (25 courses)</li> <li>Petrochemical Engineer Programs (14 courses)</li> </ul>	<ul style="list-style-type: none"> <li>R&amp;D special skills</li> <li>R&amp;D management skills</li> </ul>	<ul style="list-style-type: none"> <li>Accounting School (LG Academy)</li> </ul>
HR	Procurement	IT	
<ul style="list-style-type: none"> <li>HR School (LG Academy)</li> </ul>	<ul style="list-style-type: none"> <li>Purchasing Expert Training Course (LG Academy)</li> </ul>	<ul style="list-style-type: none"> <li>Special course at LG CNS</li> <li>IT-related Certificate Course (outside training resources)</li> </ul>	

### Individual Competency Training

Globalization	e-Learning	Job Competency Training
<ul style="list-style-type: none"> <li>Regional specialist: Emerging markets such as India, Russia, Brazil, Africa</li> <li>China Biz Leader: Expert in China</li> <li>Intensive course for English, Japanese and Chinese</li> </ul>	<ul style="list-style-type: none"> <li>Management, special tasks, IT, foreign language etc.</li> </ul>	<p><b>6,637 Courses</b> Completion of 1.3 courses per capita</p> <p><b>e-Learning 3,461 Courses</b> Completion of 0.7 courses per capita</p> <p>※ e-Learning Course      ※ Including course repeats</p>

### LG Way-based Education Programs

LG Chem offers education programs based on LG Way which is the core value of LG Chem. Through the 'Team Leader Leadership Course', our team leaders are being groomed as LG Way leaders whose beliefs and behaviors are aligned with LG Way. Also, we have implemented 'Together Course', 'Professional Leader Course' and 'Middle Manager Course' with an aim to sharpen organizational competitiveness through systematic development for employees from entry-level to manager-level as they are the next generation engine for sustainable growth.

### Expert Development

A technical expert development program is in place for each business division to ensure that employees can take trainings in a systematic way from the beginning to grow into an expert who possesses the best technology in the areas where they belong. Currently, Battery Academy, IT & Electronic Optical Academy and Petrochemical Engineer Programs are available. These programs allow employees to learn expertise and technology which are accumulated in our organization and strengthen specialized capabilities, which in turn lead to stronger business competitiveness and core competencies.



## Employee Status

As of 2011 yearend, we employ 10,775 people (full-time basis) of which 88% are working at locations of operation other than the head office. By gender, there are 9,801 males and 974 females and out of those in office work, there are 4,296 males and 844 females. In 2011, we newly hired 1,722 people, with male and female workers representing 90% and 10%, respectively. During the year, a total 320 people retired, with a male-to-female ratio of 83% to 17%. The retirement ratio standing at the end of the year is 3.0%. Since 2008, new employment has risen while retirement has fallen, which is because of stronger retention activities through HR Index.

### 2011 Employee Status in Office Work

Gender	Persons	Ratio
Male	4,296	83.6
Female (Manager or Higher Level)	844 (185)	16.4 (22% of Females in Office Work)

### HR Index



## Global Talent Recruitment & Development for Localization of Overseas Business

We are working intensively on securing and cultivating local talent in attempts to accelerate the localization of overseas business. Mainly in China, we are seeking the localization of overseas subsidiaries through management led by local employees.

### Hiring and Cultivating Local Workforce

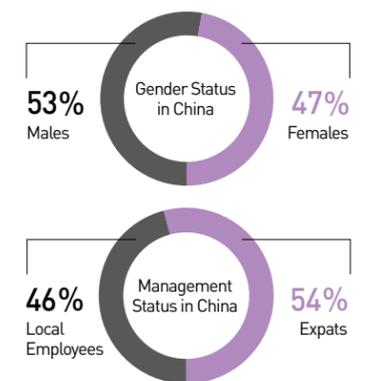
As of the end of 2011, LG Chem has presence in 15 countries across the world (China, Taiwan, India, Vietnam, Thailand, Indonesia, Singapore, Japan, U.S., Brazil, Germany, Poland, Turkey, Russia and France), operating total 29 overseas subsidiaries and representative offices. We employ 7,700 people abroad, of which 7,500 are local hires (98%). Among them, 6,400 people are based in China, accounting for 83% of total overseas workforce, including 6,300 that are locally hired. The ratio of local workforce in the Chinese subsidiaries has kept rising since 2005 and in 2011, 98% of total employees were local workforce.

In China, we organize regular on-campus recruiting tours twice a year at major Chinese universities based around our local subsidiaries to secure entry-level workers. We also carry out unscheduled recruiting throughout the year to bring experienced human capital on board with a required set of business skills for successful local operation. For a manager-level or higher position in the American and European region, we rely on local recruiting firms to bring in highly qualified human resources. Furthermore, we carry on with our initiatives to cultivate local workers who can competently lead local operations in place of Korean expatriates such as HPI programs, HQ trainings, HR/finance workshops and other function-specific workshops as well as LG Way dissemination & internalization trainings.

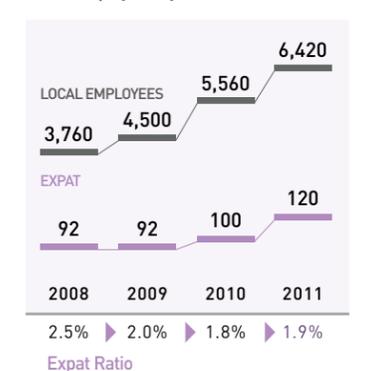
### Chinese Subsidiaries' Principles for HR Management

Our Chinese subsidiaries encourage employees to develop capability fit for their personal traits. In this process, rewards are made based on individual performance and capability, and work engagement is improved. In addition, temporary employment is avoided and any practice to disguise employment relationships is not allowed.

### Employee Status in China



### No. of Employees by Year



## Corporate Culture

### Direction for Corporate Culture Innovation

LG Chem is encouraging employees to create a creative and autonomous corporate culture based on 'LG Way,' the principles on which LG employees base their thinking and behavior. Such work environment helps employees at LG Chem to strengthen global organizational capacity and further to create excellent performance.

With the belief that each and every employee is the source of differentiated competitiveness, we are intent on embedding Speed Management based on LG Way and core values into the organization so as to innovate corporate culture. To this end, we are attempting to look into the future and make preparations earlier, focus on core business and produce outcomes faster, and do check more frequently so as to achieve goals. In order to ensure faster achievements, LG Chem has conducted an innovation campaign for 'Reporting/Meeting/Leaving the Office Culture' since 2006.

LG Chem is supporting employees in identifying and developing their strengths based on trust among employees so that they can feel fun and get more engaged in their job. In this environment, employees are able to display their creativity and make an achievement repeatedly based on the rewarding experience.

### Corporate Culture Innovation Activities

LG Chem keeps providing all employees with education and training to share and embed core values including concepts, significance and correlation of LG Way and Speed Management in the organization. Leadership development programs have been continuously provided to team leaders with an intention to maintain and enhance high interest and commitment to corporate culture. In addition, leadership workshops are used as a venue for executives and team leaders to identify and share the progress and best practices of Speed Management

In an effort to improve corporate culture innovation activities, diverse surveys on corporate culture (e.g. LG Way Survey, Leadership Survey, and Survey of 'Reporting/Meeting/Leaving the Office Culture') and interviews of employees have been conducted and analyzed, and action plans for improvement have been devised and executed under consultation with each division. Since 2006, we have operated the guidelines for drafting a report, sharing agenda and materials prior to meetings as part of the innovation campaign for 'Reporting/Meeting/Leaving the Office Culture', thereby creating a work environment where unproductive practices are eliminated and core activities are more focused on. We also emphasize the importance of self-development and the balance between work & life by encouraging employees to leave the office for the day on scheduled time to spend after-work time in refreshing and developing themselves.



Executive Leadership Workshop



Team Leader Leadership Workshop



## Welfare Benefits

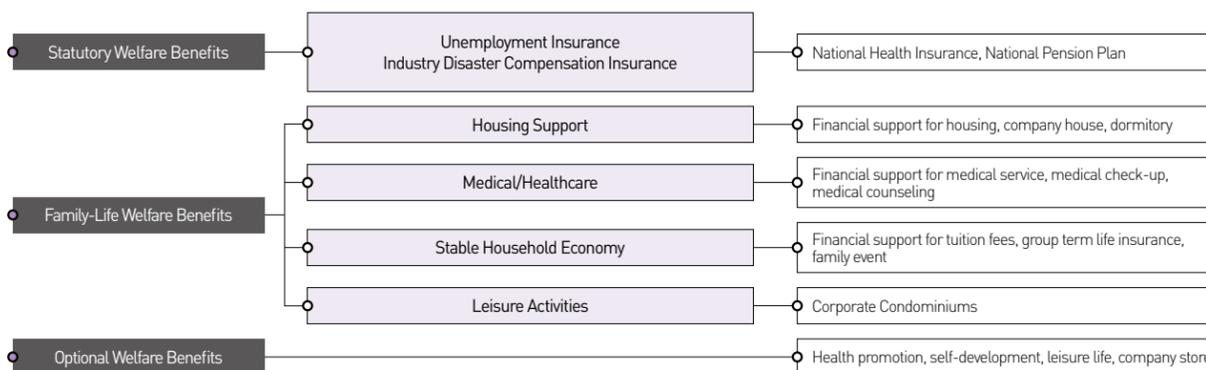
### Welfare System

We provide diverse welfare benefits for employees to have more stable and healthy life so as to get more engaged in the company by instilling a stronger sense of pride in our employees and creating a good work atmosphere. Our welfare system is composed of statutory welfare benefits (four types of insurance); family-life welfare benefits designed to ensure the stable life of employees such as supports for housing, medical/healthcare, stable household economy and leisure activities; and optional welfare benefits that employees are offered to select benefits based on individual's preference and life style. Optional welfare benefits were introduced in 2006 to promote the work & life balance (WLB) of employees. Employees are free to select benefits to enjoy leisure activities and do self-development. Every year, we publish a Welfare Guidebook and collect feedback from employees on a regular basis to improve our welfare system and raise employee satisfaction. Maternity leave (pre-natal or post-natal leave) and child-care leave are also provided to protect maternity and to strike a balance between personal and work life.

Childcare Center at Ochang & Cheongju Plants



### LG Chem's Welfare System



### Health Promotion Activities

LG Chem has in place various health care programs such as on-site medical visits, to prevent general and occupational illnesses; delivery of health information; physical therapies to prevent musculoskeletal diseases; and preventive activities jointly organized with external expert groups targeted at noise-induced hearing loss which is commonly found in manufacturing plants but difficult to treat. Every year, medical check-up is provided to promote the health of employees and the check-up results are used for medical counseling. We run a health promotion program in connection with hospitals to provide healthcare solutions customized to individual employees. We also carry out diverse campaigns for non-smoking, alcohol-in moderation, and body fat control. Additionally, a health promotion center equipped with a blood pressure monitor and a body fat analyzer is in operation at each location of operation for employees to check regularly and manage health condition on their own. We operate a psychological counseling center to help employees maintain a sound mind. With the help of counselors, employees are able to resolve issues in their personal life and if necessary get professional assistance.

### Welfare Activities of Chinese Subsidiaries

Our Chinese subsidiaries provide medical check-up every year to promote the health of employees and also participate in China's national health insurance program to relieve the medical burden of employees. LGCE NJ has launched a campaign for vibrant dormitory life to support diverse activities such as sports, culture and entertainment. LG Bohai has renovated its fitness center and locker room especially in consideration of female workers, and sports facilities for table tennis, badminton and football are arranged in efforts to create a pleasant work environment and promote employee health.

### Retirement Pension Plan

Defined Benefit (DB)

Defined Contribution (DC)

- Pension Plan designed to guarantee after-retirement income and manage retirement pay stably
- Basically a defined benefit plan is offered, however, a defined contribution plan is optional.

LGCE NJ's Campaign for Vibrant Dormitory Life



# LABOR-MANAGEMENT COLLABORATION

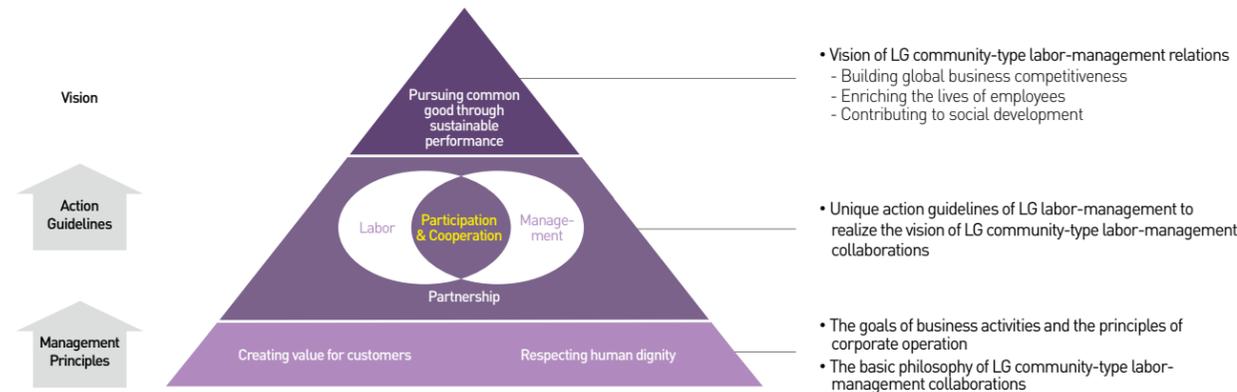
We believe in a horizontal relation between labor and management, not a vertical structure that has often defined the dynamics between union and management. We seek to establish a labor-management collaboration underpinned by mutual respect and equality.



## Vision for Labor-Management Relations

Embracing our management principles of 'creating value for customers' and 'respecting human dignity', LG Chem envisions a labor-management partnership for participation and cooperation. We aspire to materialize community-type labor-management relations that help build global competitiveness in our business, enrich the lives of our employees and contribute to social development through sustainable performance.

### Vision for Labor-Management Collaboration



## Three-Dimensional Model for Labor-Management Collaboration

LG Chem aims to build community-type labor-management collaboration. We have, therefore, put in place a unique model for collaboration that facilitates interactive participation and cooperation in three different dimensions interlinked with labor-management collaboration, namely, corporate management, field operation and collective bargaining. The direction of cooperation between labor and management is defined as follows - to enhance the value of the company and the employees through transparent and open management in the corporate management dimension; to maximize productivity through strong teamwork and innovation in the field operation dimension; and to establish a business-oriented labor-management collaboration on the basis of rational industrial practices and a productive negotiation culture in the collective bargaining dimension. In addition, the collective bargaining agreement signed between the union and the management applies to all our employees as per relevant labor laws. The agreement was conducive to further solidifying the platform for collaboration, by specifically mandating the management to hold consultation with the union in advance and in good faith to implement major changes in business.

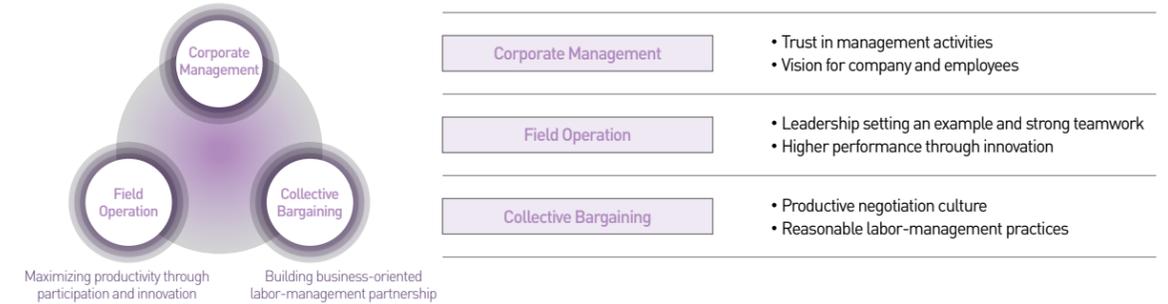
### Labor Union Membership

5,137 persons

※ LG Chem protects employees' freedom of association and three basic labor rights.

### Three-Dimensional Model for Labor-Management Collaboration

Enhancing Value of Company and Employees



## Major Initiatives of Labor-Management Collaboration

**Corporate Management** LG Chem strengthens field management of top managers through the CEO's 'Dialogues with Employees' and the CHO's 'HR sharing meetings'. We also facilitate effective communication with the management team based on 13 Junior Boards from each business division. In addition, we measure how much trust our employees have in management activities and identify any opportunities for improvement through annual satisfaction surveys.

**Field Operation** We run a wide range of team building programs and empower line managers in handling complaints and grievances to ensure field-driven personnel management. We are dedicated to promoting a more decent workplace through operating a joint labor-management committee on occupational safety and health. We also provide our employees with overseas industrial training opportunities to broaden their horizons on the global market and competitive landscape.

**Collective Bargaining** Business performance is shared and key pertinent agendas are discussed through a labor-management council held on a quarterly basis. We run a joint labor-management task force when there is a need to improve our HR/welfare system. In addition, we discuss ways to seek mutual growth between labor and management through joint workshops prior to annual collective wage bargaining negotiations, and form a working-level committee during such negotiations to promote a productive culture for negotiation.

Labor-Management Industrial Safety & Health Committee



## Tangible Outcomes from Labor-Management Collaboration

**Stronger Business Competitiveness and Higher Employee Satisfaction** LG Chem has successfully carried out collective wage bargaining negotiations in the last eight years without a single labor dispute to date, by capitalizing on our 'three-dimensional model for labor-management cooperation' built on a spirit of engagement and collaboration. These accomplishments have not only become the source of competitiveness for the company, but also helped provide a best-in-class working environment and welfare benefits for our employees. LG Chem, as a result, has earned recognition for its significant contribution to labor-management collaboration stability in the industrial workplace in Korea.

**Safe Workplace through a Joint Labor-Management Effort** A joint labor-management inspection on work practices and environment is conducted every quarter to identify areas for improvement with an intention to improve work efficiency and reduce cost as well as promote safety and health of employees.

**Innovation Activities based on Labor-Management Agreement** Prior to execution of workplace innovation programs, we discuss a program operation plan with the labor union via Labor Management Committee in an effort to maximize voluntary participation of employees. We also continue to share performance of the innovation programs with the labor union and the labor union leadership attends the Best Practice Contest for innovation activities in the capacity of judge.

Labor-Management Industrial Safety & Health Committee

Item	Frequency	Membership
Place of Operation	Quarterly	10 from Each Labor and Management

Major Deliberations Made by Industrial Safety & Health Committee in 2011

- Plan for improving PSM
- Plan for improving the way to transport magnetic substances
- Improvement of personal protective equipment
- Additional installation of blood pressure monitors

# SOCIAL PARTNERSHIP

LG Chem adopts a 'Creative Capitalist' approach to social contribution, going beyond short-term, one-off donations or charities. We focus on youth education, youth welfare, local community support and global social contribution in fulfilling our social responsibilities.



## Corporate Citizenship

One step further from 'market economy capitalism' based on which we contributed to the development of national economy as a leading chemical company, we are now pursuing 'creative capitalism' which requires us to fulfill corporate social responsibility to improve the lives of the socially vulnerable neighbors.

## Directions for Social Contribution

Social contribution activities are systematically carried out in four major selected areas: youth education, youth welfare, local community support, and overseas social contribution. In the education area, we leverage our expertise as a chemical company to raise the interest of youth in science and technology and contribute to nurturing young talent. We actively engage in education projects to improve the welfare of youth in a belief that the youth is a hope for the future of Korea. At the same time, we implement welfare projects for the economically marginalized as one of the four major social contribution areas to help ease an ever-deepening income gap and create a better world for all.

With a strong belief that LG Chem grows sustainably with local communities, we carry out diverse social contribution activities in connection with local communities. In addition, we look for a way to contribute to the development of host countries where our subsidiaries are operating, shedding away from the outdated thought that they are simply a production or sales base.



## Organization for Social Contribution

The commitment to social contribution has always stayed with LG Chem throughout its history. Directed by a corporate culture that stresses autonomy and creativity, LG Chem embarked on a journey towards corporate citizenship, first providing support to the employees for their self-initiated group gatherings and community service. Our journey came to make a significant progress in 2004 when a matching grant system for donation was introduced at LG Chem. In May 2008, we set up a dedicated team for planning and managing social contribution activities, and staffed new full-time hires to make our activities more organized and systematic. Following in July, we officially launched the LG Chem Social Community Group (SCG) comprising 4,000 employees with our CEO at the helm, after integrating individual social community groups at 10 locations of operations in Korea. Afterwards, social contribution workshops were held for the relevant, responsible managers to share our strategy and best practices so as to improve our capability continuously.

### Activities of Community Service Group

Voluntary fund-raising and community service activities are operated at the initiative of LG Chem Community Service Group with the membership of around 4,000 employees. Apart from various social contribution and donation projects at a corporate level, the 'LG Chem Twin Angel Fund' has been voluntarily raised since 2005. As of 2011, 4,789 employees or roughly a 45% of our employees in Korea made a donation into the Fund, accumulating KRW 320 million every year to be spent for different community services.

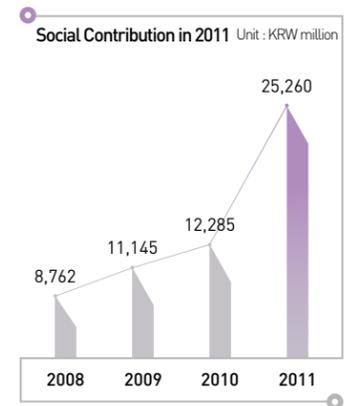
A total of 98 community service groups at the head office, eight plants and one research park have engaged in more than 1,000 community service activities for 7,500 hours combined a year. Projects entitled 'Create a Classroom of Hope', 'Junior Science School', and 'LG Chem Community Service Day' are major community services provided by our CSGs.



## Education Projects

### Chemistry Frontier Festival

LG Chem organizes 'Chemistry Frontier Festival' in Korea every year - a chemistry contest targeted at high school students to cultivate future talent in science and technology and raise their interest in chemistry. This program is jointly sponsored by LG Chem, Hanwha Chemical, Samsung Total Petrochemicals Co., SK Energy and Honam Petrochemical Corp, and is organized by Korea Petrochemical Industry Association. A total of 5,982 teams so far have participated in this program over the past 8 years starting with the first contest in 2004, and the number keeps growing. Indeed, the festival now takes hold as the best and biggest contest for the high school students in Korea. The winners in the top rank are given various benefits including a chance to get overseas training as well as special employment privileges if they join one of the co-hosting companies.



### Organization for Community Service



### Fascinating Chemistry! LG Chem Chemistry Camp

Our annual chemistry camps are targeted at middle school students to increase relevance and familiarity of chemistry through various chemistry experiments and camp activities during school vacations. 'Fascinating Chemistry! LG Chem Chemistry Camp' was first introduced in 2005 as one of our outreach programs that reflect our identity as a chemical company. The camps are held four to five times a year, attended by some 700 middle school students. This 3-day event is fun and educational at the same time. There are exciting chemistry experiments and spectacular magic shows for educational purposes, as well as other programs such as UCC contests and the King of Study to help the students do better at school. Such colorful combination of programs has indeed fascinated the participants in the chemistry camps.

### Junior Science Class

The 'Junior Science Class' is a program launched in 2004 for elementary schools and childcare centers in the Daejeon area to help the students experience what science is really like through experiments and practice sessions, capitalizing on scientific knowledge of our researchers at Daejeon Research Park. From 2007, we have been offering over 20 classes every year specifically targeting students from community welfare center with limited access to various learning opportunities. In May 2010, the science class was held on the sideline of Children's Day events in Daejeon City where some 200 people took part to discover fun in science and experience it through experiments. The program, planned and run by our researchers through their voluntary involvement, is increasingly being perceived as a professional social contribution activity as it draws on expertise and competence of our highly qualified researchers who hold advanced degrees.



## Youth Welfare Projects

### Build a Library of Hope

LG Chem has implemented the project 'Build a Library of Hope' with a total budget of KRW 360 million a year since 2007 with a goal of developing a reading culture for the youth who will play a leading role in the future, and providing a cultural venue to local residents who are culturally marginalized. In 2011, we opened a library in YMCA Eco-Education Building in Yeosu, Oksan Elementary School in Cheongwon, and Joongang Elementary School in Naju. In particular, we have extended the scope of this project to middle schools to reach out to the youth in wider age groups since 2009. One step further, we opened a library in youth welfare facilities such as Don Bosco Youth Center in Yeongdeungpo and YMCA Eco-Education Building in Yeosu starting from 2010.

This project has been conducted in collaboration with the Book Culture Foundation with a goal of building a library as a multipurpose cultural venue, moving beyond the traditional concept of library as a place for reading. To this end, we designed the library to be equipped with playing facilities of variety and audio & visual equipment from the beginning with a focus to make children and local residents feel comfortable in the library. Additionally, we used eco-friendly finishing materials for the health of students visiting the library. All 14 libraries which we have built so far have served as cultural venues in the local communities, becoming a pride and joy to local residents.



### Create a Classroom of Hope

The idea for 'Create a Classroom of Hope' comes from the fact that social protection arrangements for the youth, who are socially marginalized, are relatively inferior to those set up for the elderly or the disabled. Members of the community service group tapped into their individual job skills to draw wall paintings to inspire the youth and renovate the youth facilities into a better learning environment. Furthermore, community services we could do with the youth were developed and conducted to instill dreams and hopes in the youth.

This community service has received positive feedback from participants and even greater response from the beneficiaries, as our employees can utilize their unique job competency. Starting with a community center in Yeongdeung-po, Seoul, in July 2008, we had the 7th plate-hanging ceremony at a community center in Seongsan run by Ewha Womans University in 2011. Currently, we pick two community welfare centers every year from applicants to continue the spirit of this project.



### Mini Interview

**Lee Ji-Na** Environment/Climate Change Team

My first community service that I participated after I joined LG Chem was a very rewarding experience. The 'Create a Classroom of Hope' program was conducted together with university students participating in LG Dream Challenger, which made our activities more pleasant.

In addition to reward and happiness that come from service itself, I hope that the fact the helping hand is always out there is delivered to the kids so as to make them feel less marginalized.



**Jeon Kang-Su** Student of Korea University

Community service was distant from my life, but it is now close to me. I participated in the wall-painting activities for Salesian Sisters. In the beginning, I thought it would be fun; however, it was not easy to plug holes and paint the wall. Nonetheless, I felt rewarded when I saw the painted wall in the end.

It was also an opportunity to realize that leaning is a journey not a destination while talking with employees from LG Chem. I was impressed by that employees who have no chemistry background kept studying chemistry after they joined LG Chem. I felt like that I was now able to envision my future.

### Musical Holiday and Mecenat Programs

LG Chem is engaged in a variety of Mecenat programs to broaden access to high arts and culture for the underprivileged people. We reach out to military servicemen with a limited access to cultural events as they often get overlooked in social contribution activities. We have been organizing 'Musical Holiday' programs with fusion musical troupe 'Taru' since 2007 to present musical performances for soldiers at the militaries. Total 20,000 soldiers and local residents came to watch 4 to 7 musical performances in the remote areas of Ul-leung Island, Baengnyeong Island and Gangwon Province. Moreover, 'Fun Ticket Sharing' project started across the country in 2006 to give the less fortunate a chance to come to concerts and performances. Every year, we offer cultural and artistic opportunities to around 10,000 young students from low-income families to enrich their lives and help them pursue their dreams as artists. Our 'School Concert' is especially popular among students as we go to the schools to hold cultural performances for them. Our devoted endeavors towards promoting cultural enrichment of our communities has given the company an honor of winning the 'Cultural Management Award' at Mecenat Awards 2009, despite a short history of only 3 years.



## Local Community Support Project

### Hobby Clubs' Community Service

LG Chem is encouraging employee hobby clubs to participate in community service activities as part of efforts to promote talent donation of employees. Since LG Chem began to support employee hobby clubs from 2009, their community service has grown to the extent that hobby clubs in 10 locations of operation across the country voluntarily carried out more than 60 community service activities in 2011.

For example, a skin scuba club carried out beach clean-up activities in Yeosu and Daesan, and a traditional percussion instrument club named 'Cheon-Doong-So-Ri' (meaning thunder sound) and a music club name 'Pa-Rang-Sae' (meaning a blue bird) made a free performance in the socially marginalized areas or at community welfare centers. LG Chem will keep encouraging employee hobby clubs to carry out community service activities.

### One Plant-One Military Unit Sisterhood Relation

LG Chem has built a sisterhood relation with a military unit located close to Paju plant in a bid to promote the morale of military servicemen and to support their life in the military. Every winter from 2009, we provided soldiers with daily necessities. Then in 2011, we reached a sisterhood relation to support the welfare and cultural life of soldiers systematically. Going forward, we will not only give exemplary soldiers a musical ticket, but also make a cultural performance for soldiers in the military. In return, the military unit will provide security training to our employees, and a chance to visit the Panmunjeom truce village for our foreign buyers. As such, we will keep carrying out win-win activities.

### Support to International Marriage Migrant Women

LG Chem has taken the initiative to support international marriage migrant women in settling down in Korea. On the occasion of Chuseok, Korea's Thanksgiving Day, we helped 120 multicultural households in Yeosu prepare Korean traditional food. We also supported 50 international marriage migrant women in sending year-end gifts to the family in their mother country. In the days to come, we will provide support to international marriage migrant women and multicultural households continuously.



## Community Service at Each Location of Operation

Location of Operation	Community Service		Remarks
Research Park	No. of services	52 times	Junior Science School, Twin Angel Fund
	Total service hours/year	364 hours	
	No. of participants (incl. family members)/year	255 persons	
	No. of service groups (team)	21 teams	
Naju Plant	No. of services	129 times	I Love Naju Day, Visit to sisterhood households
	Total service hours/year	603 hours	No. of participants X 2 hours
	No. of participants (incl. family members)/year	868 persons	Including redundancy
	No. of service groups (team)	4 groups	Community service groups, Sub-community service groups (team-based, female worker-based, spouse-based)
Daesan Plant	No. of services	126 times	Housing environment improvement for the elderly living alone, Beach clean-up
	Total service hours/year	882 hours	
	No. of participants (incl. family members)/year	1,119 persons	
	No. of service groups (team)	8 groups and 12 sub-groups	
Ochang Plant	No. of services	66 times	Financial support for child breadwinners, Visit to community welfare centers
	Total service hours/year	462 hours	
	No. of participants (incl. family members)/year	473 persons	
	No. of service groups (team)	5 groups	
Iksan Plant	No. of services	23 times	Sharing Briquette for Love, Bathing Service for People with Disability
	Total service hours/year	161 hours	Average 2 hours per service
	No. of participants (incl. family members)/year	345 persons	Average 10 persons per service
	No. of service groups (team)	5 groups	Reduced number of groups from 10 in 2009 due to consolidation of service groups
Cheongju Plant	No. of services	57 times	Voluntary social service, Employee Hobby Clubs' community service, Financial support using donation & Twin Angel Fund, Sharing Briquette for Love, Athletic Field Day for children from community welfare centers
	Total service hours/year	399 hours	3 hours per service
	No. of participants (incl. family members)/year	850 persons	
	No. of service groups (team)	4 groups	
Yeosu Plant	No. of services	630 times	Support for community children center, Support for international marriage migrant women
	Total service hours/year	4,410 hours	
	No. of participants (incl. family members)/year	2,485 persons	
	No. of service groups (team)	39 groups	Including sub-service & informal groups





## Overseas Social Contribution

With employees' active participation, our Chinese subsidiaries carried out social contribution activities to support schools in poor communities under the slogan of 'Promote Youth Health' in 2011.

### Affection for Youth

With Affection for Youth set as one direction for social contribution, we have conducted education projects to provide scholarships and support schools in poor communities. In 2011, we rolled out a new campaign to improve hygiene environment and replace drinking water pipes of schools in poor communities. As part of the campaign, LG CCI invested RMB 100,000 in replacing drinking water pipes of an elementary school and improving orchard irrigation in six villages nearby the elementary school in Tianjin in May 2011.

### Social Welfare

Social welfare activities are to help the socially vulnerable such as the elderly, the physically disabled, and the mentally retarded children with affection so as to make them feel warm and happy. In May 2011, LGCE BJ donated kitchen appliances, 10 computers and household goods to a community welfare center in Beijing where prisoners' children live together. LG BOHAI donated two LG laundry machines, one gas stove and groceries to a community welfare center for children with disability in Tanggu District. On May 13, 2011, LG DAGU was entitled "Top 10 Angels" by the Tianjin City government.

### Local Community Support

In addition to Affection for Youth and Social Welfare, our Chinese subsidiaries are involved with many meaningful social contribution activities for different causes such as environmental protection, relief, cultural property protection and local community contribution. In November 2011, LG YX donated four medical checkup equipments worth approximately RMB 300,000 to a healthcare center on Bosan Street. LGCE BJ carried out activities to promote transportation safety and LG XY helped improving non-industrial waste water treatment facilities in two villages with an investment of RMB 100,000.



- Project Name: Drinking Water Improvement
- Objective: Improve school drinking water condition and orchard irrigation
- Period: Since 2011
- Activities: Replaced drinking water pipes of an elementary school and improved orchard irrigation in six villages in Tianjin.



- Project Name: Love Donation
- Period: Since 2011
- Activities: Donated kitchen appliances to a community childcare center in Beijing



- Project Name: Donation to Healthcare Center
- Period: Since 2011
- Activities: Donated medical check-up equipment to a healthcare center in Bosan

## Overseas Social Contribution Performance

### History of Overseas Social Contribution

Year	Activities
1996	Global talent development Scholarship project (Beijing and Tsinghua University)
2003	'I Love Ningbo' campaign
2004	Expansion of scholarship programs in line with the launch of a holding company
2006	A tree-planting campaign at a forest park in Tanggu District
2009	Expansion of youth education support (scholarship, education facilities)
2010	Determination of directions and slogan for joint activities / Projects for improving school hygiene and drinking water condition
2011	School environment improvement project in poor communities under the slogan of 'Promote Youth Health'

### Main Social Contribution Activities by Overseas Subsidiary

Overseas Subsidiary	Activities
LG DAGU (Tianjin, China)	Affection for Youth (donation of computers, drinking water dispenser and cultural & sports goods) Social welfare (Tianjin SOS welfare center, elderly community halls) Environmental campaign (tree-planting, Tanggu District's Environment Day)
LG BOHAI (Tianjin, China)	Social welfare (visit to special education institution, visit to elderly community halls)
LG YX (Ningbo, China)	Affection for Youth (LG YX summer vacation camp in Houdajie community), social welfare (visit to Ningbo Enmei Children's Welfare Institute, visit to elderly community halls) Environmental campaign (tree-planting, community clean-up) Local community support (donation of medical checkup equipment, sponsor for children's song contest)
LG NJ (Nanjing, China)	Affection for Youth (renovation of computer room and donation of seven computers and 120 blackboards for Yanzi rock Primary School) Environmental campaign (tree-planting)
LGCC GZ (Guangzhou, China)	Scholarship (Sun Yat-Sen University) Affection for Youth (donation of books, and cultural & sports goods, and foundation of "Love Library" for Junhe Primary School and Jiulongyi Primary School) Social welfare (visit to Luogang District homes for the aged) Environmental protection (Longtou Hill)
LGCI TJ (Tianjin, China)	Social welfare (visit to mental disability children school in Tianjin)
LGCE BJ (Beijing, China)	Scholarship (Daxing District Hope Primary School) Social welfare (donation of kitchen appliances to a child care center in Beijing) Local community support (transportation safety promotion, road environment protection)
LGCE TP (Taipei, Taiwan)	"LG Love" campaign at community child care centers in Mu Xiang (donation of computers, sponsorship for financially stricken students)
LGCCI (Beijing, China)	Affection for Youth (school drinking water improvement, youth health promotion, sponsor for Beijing sightseeing for children in rural areas), social welfare (visit to Longwanton Homes for the aged, development of audio textbook for people with disability, visit to child care centers and elderly community halls)

### Success Case of Social Contribution

In May 2011, LG CCI replaced drinking water pipes of an elementary school and improved orchard irrigation in six villages nearby the elementary school in Tianjin.



Before



After



# APPENDIX

## Performance Data

### Economic Performance

※ Data for 2010 and 2011 only is displayed due to early application of IFRS in 2010.  
For data prior to 2010, please see 2009 Sustainability Report.

#### Key Management Indicators

Stability Unit: %

Category	2010	2011
Current Ratio	147.0	153.6
Debt-to-Equity Ratio	61.6	57.5
Dependency on Borrowings	26.8	26.0

Profitability Unit: %

Category	2010	2011
Operating Income Margin	14.5	12.5
Net Income Margin	11.3	9.6
ROA	19.0	15.5
ROE	31.9	24.7

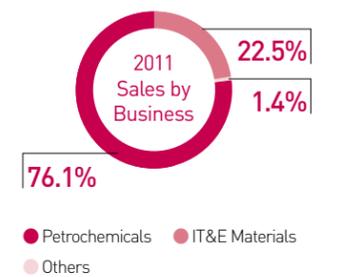
Growth Unit: %

Category	2010	2011
Sales Growth	25.5	16.5
Operating Income Growth	34.5	0.5
Net Income Growth	42.9	-1.4
Total Assets Growth	20.3	20.6

### Economic Performance by Business

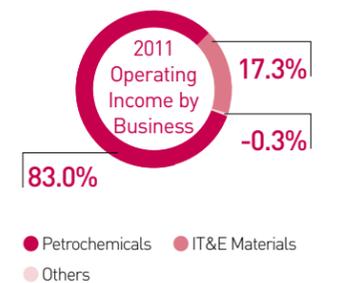
Sales Unit: KRW 100 million

Category	2010	2011
Petrochemicals	145,255	172,654
IT&E Materials	49,030	50,957
Others	430	3,145
<b>Total</b>	<b>194,715</b>	<b>226,756</b>



Operating Income by Business Unit: KRW 100 million

Category	2010	2011
Petrochemicals	22,789	23,532
IT&E Materials	6,001	4,907
Others	-576	-85
<b>Total</b>	<b>28,214</b>	<b>28,354</b>



## Distribution of Economic Value

### Dividend

Category	2010	2011
Net Income (KRW 100 million)	21,998	21,697
Primary & Diluted Earnings per Share (KRW)	29,345	29,069
Dividend Ratio (Par value, %)	80	80
Total Dividend (KRW 100 million)	2,945	2,945
Dividend Payout (%)	13.4	13.6
Dividend Yield (%)	1.0	1.26

### Procurement

Unit: KRW million

Business	Type	Items	Usage	Amount (2011)	Ratio (%)	Supplier
Petrochemicals	Raw Materials	Naphtha, EDC	PE/PVC	10,974,797	77.16	GS Caltex / OXY / Dow Chem
IT&E Materials	Raw Materials	TAC Film, Cobalt	Polarizers, Batteries	3,212,611	22.59	Fuji etc.
Common	Sub-Materials	Antioxidants	To improve the physical properties of products	35,995	0.25	Others
<b>Total</b>				<b>14,223,403</b>	<b>100.0</b>	

### Corporate Tax

Unit: KRW million

Category	2010	2011
Income tax expenses from continuing operations	618,672	626,928

### Labor Cost

Unit: KRW million

2008		2009		2010		2011	
Total Annual Payroll	Total Payroll per Capita	Total Annual Payroll	Total Payroll per Capita	Total Annual Payroll	Total Payroll per Capita	Total Annual Payroll	Total Payroll per Capita
688,020	64	512,233	62	572,324	62	677,200	63

※ No gender discrimination on wage excluding executives  
 ※ Total annual payroll excluding fringe benefit and appropriation for retirement, based on Korean locations of operation (excl. overseas subsidiaries)

### Expense on R&D

Category	2008	2009	2010	2011
Manpower (Persons)	1,791	1,701	2,131	2,522
R&D Investment (KRW 100 million)	2,561	2,237	2,797	3,418

## Environment · Safety Performance

### Environmental Investment

#### Environmental Investment Amount

Unit: KRW million

2008	2009	2010	2011
37,436	42,101	46,024	37,657

※ Scope: All locations of operation in Korea

### Feedstock & Water Usage

#### Intensity of Feedstock & Water Usage

Category	2008	2009	2010	2011
Category Feedstock (ton/product ton)	0.98	1.17	1.12	1.09
Water (m <sup>3</sup> /product ton)	4.44	3.90	3.76	3.34

※ Scope: All locations of operation in Korea and Nanjing, Yongxing, Dagu, Bohai, and Gwangzhou in China

### Energy

#### Energy Consumption

Unit: TJ

Category	2008	2009	2010	2011
Direct Energy Source	1,052,825	1,100,862	1,137,984	1,112,068
Indirect Energy Source	2,852,547	3,144,163	3,266,837	3,372,931
<b>Total</b>	<b>3,905,372</b>	<b>4,245,025</b>	<b>4,404,821</b>	<b>4,484,999</b>

※ Scope: All locations of operation in Korea and Nanjing, Yongxing, Dagu, Bohai, and Gwangzhou in China

#### Intensity of Energy

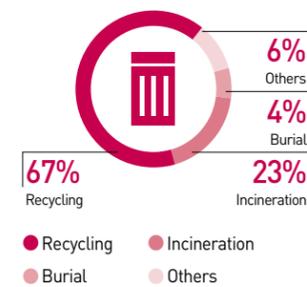
Unit: TJ/ton

Category	2008	2009	2010	2011
Petrochemicals	4.650	4.729	4.639	4.634

※ Scope: Petrochemical plants in Korea

### Waste

#### Waste Disposal in 2011



※ Scope : All locations of operation in Korea and Nanjing, Yongxing, Dagu, Bohai, and Gwangzhou in China

#### Intensity of Waste Generated

Unit: kg/product ton

Category	2008	2009	2010	2011
General Wastes	11.3	8.6	10.8	11.3
Designated Wastes	2.5	2.2	2.5	2.4

※ Scope: All locations of operation in Korea

#### Waste Recycling

Unit: %

Category	2008	2009	2010	2011
General Recycling	66	63	63	67

※ Scope: All locations of operation in Korea and Nanjing, Yongxing, Dagu, Bohai, and Gwangzhou in China

#### Wastewater

Unit: m<sup>3</sup>/product ton

Category	2008	2009	2010	2011
Intensity of wastewater	1,205	1,102	1,033	1,051

※ Scope: All locations of operation in Korea and Nanjing, Yongxing, Dagu, Bohai, and Gwangzhou in China

## Water

### Wastewater Generation by Type

Unit: kg/product ton

Category	2008	2009	2010	2011
COD	0.056	0.052	0.050	0.049
Intensity of T-N	0.012	0.013	0.016	0.015
Intensity of NH <sub>3</sub> -N	0.039	0.044	0.020	0.014

※ Scope for COD: All locations of operation in Korea and Nanjing, Yongxing, Dagu, Bohai, and Gwangzhou in China

※ Scope for Intensity of T-N: All locations of operation in Korea

※ Scope for Intensity of NH<sub>3</sub>-N: Plants in Nanjing, Yongxing, Dagu, Bohai, and Gwangzhou in China

## Air

### Intensity of Dust/SOx/NOx

Unit: kg/product ton

Category	2008	2009	2010	2011
Dust	0.024	0.018	0.019	0.016
SOx	0.064	0.053	0.061	0.045
NOx	0.111	0.102	0.078	0.074

※ Scope: All locations of operation in Korea and Nanjing, Yongxing, Dagu, Bohai, and Gwangzhou in China

## Climate Change

### Greenhouse Gas Emissions

Unit: tCO<sub>2</sub>-eq

Category	2008	2009	2010	2011
Direct Emissions	4,253,893	4,197,608	4,317,573	4,327,029
Indirect Emissions	2,637,371	2,810,282	2,891,000	3,041,225
<b>Total</b>	<b>6,891,264</b>	<b>7,007,890</b>	<b>7,208,573</b>	<b>7,368,254</b>

※ Scope: All locations of operation in Korea and Nanjing, Yongxing, Dagu, Bohai, and Gwangzhou in China

### SCOPE3 Emissions

Unit: tCO<sub>2</sub>-eq

Category	2008	2009	2010	2011
Electric Power	23,460	22,096	30,745	23,419
Steam	129,529	142,772	78,490	19,993
<b>Total</b>	<b>152,990</b>	<b>164,868</b>	<b>109,235</b>	<b>43,411</b>

※ Scope: All locations of operation in Korea

### Certified Greenhouse Gas Reductions

Unit: tCO<sub>2</sub>-eq

2008	2009	2010	2011
156,677	193,157	263,017	228,094

※ Scope: All locations of operation in Korea

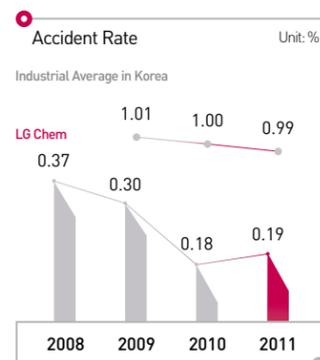
### Ozone Layer Destroying Substitute (SF<sub>6</sub>)

Unit: tCO<sub>2</sub>-eq

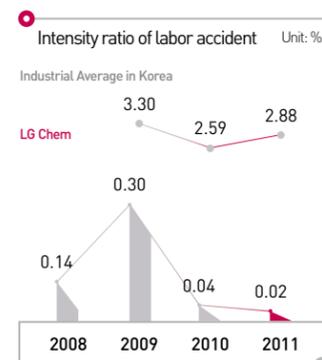
2008	2009	2010	2011
1,001	1,042	1,056	1,527

※ Scope: All locations of operation in Korea

## Safety



※ Scope: All locations of operation in Korea



※ Scope: All locations of operation in Korea

## Hazardous Chemicals Management

### Intensity of Toxic Material Use

Unit: kg/product ton

2008	2009	2010	2011
201	234	201	158

※ Scope: Korean locations of operation

### Intensity of Dangerous Good Use

Unit: kg/product ton

2008	2009	2010	2011
392	386	379	383

※ Scope: Chinese locations of operation in Nanjing, Yongxing, Dagu, Bohai, and Gwangzhou

## Environmental Performance of Korean Locations of Operation

Category	2008	2009	2010	2011
Direct GHG Emissions (tCO <sub>2</sub> -eq)	4,138,469	4,075,984	4,200,594	4,207,796
Indirect GHG Emissions (tCO <sub>2</sub> -eq)	1,487,993	1,568,884	1,583,529	1,679,829
Electricity Expense (MWh)	2,609,615	2,795,020	2,906,329	3,111,987
Thermal Energy Expense (GJ)	4,266,192	3,484,877	3,663,234	3,884,365
<b>Total Water Consumption (million ton)</b>	<b>46</b>	<b>44</b>	<b>44</b>	<b>41</b>
Industrial Water and Tap Water (million ton)	44	42	42	40
Surface and Underground Water (million ton)	2	2	2	1
Wastewater Recycling (million ton)	1	2	2	2
Product Productions (ton)	10,488,603	11,472,189	11,647,146	12,401,297
<b>Total Waste Emissions (ton)</b>	<b>37,977</b>	<b>36,952</b>	<b>43,218</b>	<b>47,134</b>
VOC Emissions (ton)	386	307	279	[ ]
NOx Emissions (ton)	1,257	1,302	984	974
SOx Emissions (ton)	747	672	802	624
COD Emissions (ton)	482	476	512	563

※ Change in GHG & energy data for 2008-2010 in accordance with the GHG & Energy Target Management System

※ Data in [ ] will be confirmed in May 2012

## Environment & Safety-Related Certification

Category	Certificate	Date	Category	Certificate	Date
Yeosu	ISO 14001	Dec. 1996	Iksan	ISO 14001	Dec. 2004
	OHSAS18001	Dec. 2000		KOSHA 18001	Nov. 2001
	Green Company	Dec. 1995		Green Company	May. 1996
Cheongju	ISO 14001	Nov. 1999	Daesan	ISO 14001	May. 2006
	OHSAS 18001	Dec. 1999		KOSHA 18001	Jun. 2010
	Green Company	Dec. 1995		OHSAS 18001	Jun. 2010
Ochang	ISO 14001	Nov. 2004	Daejeon (Research Park)	ISO 14001	Sep. 2005
	OHSAS 18001	Nov. 2004		K-OHSMS 18001	Nov. 2006
	Green Company	Dec. 2006		ISO 14001	Oct. 2008
Ulsan	ISO 14001	Dec. 1996	Gimcheon	OHSAS 18001	Oct. 2008
	Green Company	Dec. 1995		ISO 14001	Nov. 2009
	ISO 14001	Aug. 1997		OHSAS 18001	Nov. 2009
Naju	KOSHA 18001	Sep. 2000	LG YX	ISO 14001	Oct. 2004
	Green Company	Apr. 1998		OHSAS 18001	Jan. 2006
				ISO 14001	Sep. 2004
			LG DAGU	OHSAS 18001	Jul. 2006
			LG BOHAI	ISO 14001	May. 2009
				OHSAS 18001	May. 2010
			LG GZ	ISO 14001	Aug. 2006

## Social Performance

※ Scope: Korea

### Employment

#### Overall

Unit: person

Category	2008	2009	2010	2011
Plant	7,623	6,096	6,891	7,957
	71.0%	73.1%	73.5%	73.8%
Research Park	1,057	1,057	1,271	1,496
	9.8%	12.7%	13.6%	13.9%
HQs	2,057	1,184	1,211	1,322
	19.2%	14.2%	12.9%	12.3%
<b>Total</b>	<b>10,737</b>	<b>8,337</b>	<b>9,373</b>	<b>10,775</b>
	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

#### Age

Unit: person

Category	2008	2009	2010	2011
Older than 50	1,125	766	930	1,086
	10.5%	9.2%	9.9%	10.1%
40-49	3,282	2,554	2,666	2,824
	30.6%	30.6%	28.4%	26.2%
30-39	4,792	3,682	3,766	3,945
	44.6%	44.2%	40.2%	36.6%
Younger than 30	1,538	1,335	2,011	2,920
	14.3%	16.0%	21.5%	27.1%

#### New Employment and Retirement

Category	2008	2009	2010	2011
Retirement (person)	365	214	295	320
Retirement Rate (%)	4.6	2.6	3.2	3.0
New Employment (person)	475	592	1,331	1,722
New Employment Rate (%)	5.9	7.1	14.2	16.0
<b>Total (person)</b>	<b>7,959</b>	<b>8,337</b>	<b>9,373</b>	<b>10,775</b>

### Social Contribution

#### Status of Community Service Group Activities

Year	No. of Groups	No. of Services	No. of Service Time	No. of Participants
2008	82	1,175	5,056	9,511
2009	69	1,085	4,424	7,398
2010	94	1,277	6,501	8,272
2011	98	1,083	7,581	6,395

#### Donation

Unit: KRW million

Category	2008	2009	2010	2011
Charitable Donation	2,112	23	2,058	5,183
LG Foundation	2,935	183	1,640	2,483
Scholarship in Yeodo area	1,111	483	981	969
Smile Micro Bank	-	4,580	4,125	10,400
Others	2,603	5,876	3,482	6,225
<b>Total</b>	<b>8,761</b>	<b>11,145</b>	<b>12,285</b>	<b>25,260</b>

#### Employee's Fund-Raising

Unit: KRW thousand

Category	Yeosu	Cheongju	Ochang	Naju	Iksan	Research Park	Total
Establishment	May. 2005	Jul. 2005	Apr. 2005	May. 2007	Oct. 2005	May. 2005	
2008	117,068	42,000	39,964	4,457	13,325	37,000	253,814
2009	120,464	Incl. Ochang	54,834	5,490	12,988	37,102	230,878
2010	127,673	-	61,187	10,208	12,884	40,690	252,642
2011	146,678	25,081	74,604	14,208	13,114	47,538	321,223
Participation Rate (Participants)	100% (2,175)	55% (441)	42% (1,407)	100% (232)	62% (165)	28% (369)	44.8% (4,789)

#### Status of Junior Science School

Year	Target	Frequency
2008	Jahyewon in Daejeon (Orphanage), Village of Peace (Community Welfare Center)	26
2009	Cheongyangwon, HyeSaengWon (Orphanage run by the Salvation Army)	24
2010	Love Light Community Child Care Center, HyeSaengWon (Orphanage run by the Salvation Army)	27
2011	Eunhye Community Child Care Center, Welfare Community Complex in Daejeon, Lucy Community Welfare Center for Single Parent	32

#### Status of 'Build a Library of Hope'

Year	School	Location	Beneficiary (Person)
2008	Daejin Elementary	Seosan, Chungnam Province	473
	Seokam Elementary	Iksan, Jeonbuk Province	81
	Naju Elementary	Naju, Jeonnam Province	1,579
2009	Oksan Elementary	Cheongwon, Chungbuk Province	367
	Bongjeong Elementary	Cheongju, Chungbuk Province	1,570
	Wadong Elementary	Daeduk, Daejeon City	728
2010	Dongshin Elementary	Gimcheon, Gyeongbuk Province	1,255
	Wolrong Elementary	Paju, Gyeonggi Province	80
	Don Bosco Center	Yeongdeungpo, Seoul	300
2011	YMCA Eco-Building	Yeosu, Jeonnam Province	5,000
	Oksan Elementary	Cheongwon, Chungbuk Province	740
	Joongang Elementary	Naju, Jeonnam Province	736
			12,909

# Independent Assurance Statement

## Dear Stakeholders of LG Chem

The Korea Production Center has been engaged by LG Chem to verify the content in this 2011 Sustainability Report (hereafter 'the Report') and our assurance statement is as follows:

### RESPONSIBILITY AND INDEPENDENCE

The Report is prepared by LG Chem, which is responsible for all of its content. Our responsibility lies only in providing third party verification of the content in the Report. As an independent verifier, we were neither involved in the process of preparing the Report, nor in any conflicts of interest that may undermine our independence.

### VERIFICATION STANDARDS

The process of the independent verification was conducted in accordance with the AA1000 Assurance Standard 2008 (AA 1000AS 2008), type 1 that covers an assessment of adherence to the three AA 1000AS principles: Inclusion, Relevance and Responsiveness. We also performed an independent verification of the process of preparing the Report in accordance with Global Reporting Initiative (GRI) G3.1 guidelines.

### LIMITATIONS

The assurance scope covered sustainability performance information during the period from January 1, 2011, to December 31, 2011, however, the scope of work did not involve verification of information such as financial performance, some environmental information (e.g. greenhouse gas emissions), and information linked with LG Chem's website. In addition, on-site verification was limitedly conducted in the head office in Seoul and Ochang plant. Therefore, we make it clear that if additional verification is conducted in the future, the results can be different.

### METHODOLOGY

The verification of the Report was conducted by

1. Reviewing the reporting coverage and description on each GRI G3.1 index to verify if the requirements for the GRI Application Level A are met.
2. Verifying the compliance of the principles for the reporting content and quality in accordance with GRI G3.1 guidelines
3. Implementing media research and benchmarking analysis to check the appropriateness of issue identification and description.
4. Comparing and analyzing the reporting content to check the suitability and errors in e-pression
5. Conducting on-site verification in the head office in Seoul and Ochang Plant to verify the foundation of major data and information and the internal process and system.

### FINDINGS AND CONCLUSIONS

It is found that the Report covers LG Chem's sustainability management activities and performance in a faithful and fair manner. It is also concluded that the self-declared requirements for the GRI Application Level A are met.

## Inclusivity: Stakeholder Participation

LG Chem classified stakeholders into employees, suppliers, customers, shareholders and rating companies in terms of mutual influence and proximity, and collected opinions of stakeholders through diverse communication channels. LG Chem has strengthened communication with employees through HR Sharing Meetings and Junior Boards, and responded to external stakeholders through online channel for Supplier VOCs' and Solution Partner activities. It is worthy to note that LG Chem has published its sustainability report in English and Korean and operated its website in multiple languages to provide diverse communication channels to stakeholders. Expert opinions were incorporated in the process of preparing 2011 Sustainability Report which is the 6th sustainability report published by LG Chem. Due to incorporation of advanced company benchmarking and response to global sustainability management initiative, the quality of the reporting content was improved significantly and a strong commitment to practicing sustainability management was also revealed in the Report. We recommend that diverse on-and off-line communication channels be managed more systematically so as to integrate and manage opinions of internal and external stakeholders such as experts, government organization, and customers.

## Materiality: Significant Issue Identification and Reporting

It is verified that LG Chem identified issues that were relevant to sustainability management through internal strategy, global initiative, media research, and stakeholder dialogue. 59 issues were identified in seven categories and prioritized through the materiality test conducted from two perspectives : Management and Stakeholders. 'Response to Climate Change', and 'Sales Growth through New Business', 'Fair Trade' that are significant issues were described specifically in sections such as FOCUS ISSUE I GHG-ENERGY MANAGEMENT SYSTEM, RESPONSE TO CLIMATE CHANGE, BUSINESS STRATEGY, AND FAIR TRADE, and other issues were also well-balanced in the Report. It is recommended that more significant issues including currently missing management issues be addressed comprehensively in the next report and the methodology for materiality test that reflected perspectives of management and stakeholders be described more specifically to improve the understanding of stakeholders.

## Responsiveness: Organizational Response to Issues

LG Chem shares LG Groups' vision and values for sustainability management and practices sustainability management through Jeong-Do Management and Green Management which are based on its management philosophies and vision. The Report contains not only major achievement in 2011, but also future plans for the economy, environment and society, revealing LG Chem's strong commitment to mid-to long-term sustainability management. Even though response systems for each area were well described, description on sustainability management strategy and performance management to integrate and manage activities in all three areas was not sufficient. It is recommended to develop KPIs to diagnose the level of sustainability management and prepare mid-to long-term response strategy so as to integrate and manage activities in economic, environmental and social areas more comprehensively.

## Recommendations

We highly value LG Chem's efforts and performance to improve sustainability. To ensure that LG Chem continues to improve publication of the Report and sustainability management, we have provided a number of recommendations:

1. To operate an organization to report to top management and manage sustainability management performance, policy, and goals so as to manage sustainability management performance more systematically.
2. To manage diverse KPIs for sustainability management and incorporate them into the report. In particular, training time per capita, social contribution time per capita and other indicators to be companied with those of competitors should be managed systematically.
3. To establish a system to integrate and manage area-specific performance data and to prepare plans and goals for mid-to long-term sustainability management.



April 2012  
**Hong Jin**, Chairman  
 Korea Productivity Center

*진홍*

DongSoo Kim Head of Center *D.S. Kim* Jeong-seok SEO Team Leader *서정석* JuMi Park Senior Fellow *Jummi* Beomtaek Oh Researcher *태오*

The Sustainable Management Center of Korea Productivity Center is a verifier certified by Accountability, an institution that establishes global international standards AA1000 for stakeholder participation and verification, and is qualified to conduct verification on an independent basis. In addition, the Verifying Committee consists of experts who have accumulated experience in consulting and verification on sustainable management and who have completed specialized training.

# GRI G3.1 INDEX

Profile	Description	Page	● Fully ◐ Partially ○ Not reported N/A Not Applicable	Reported	Remarks
<b>Strategy and Analysis</b>					
1.1	Statement from CEO	4, 5	●	●	
1.2	Description of opportunities and challenges.	4, 5	●	●	
<b>Organizational Profile</b>					
2.1	Name of the organization.	106	●	●	
2.2	Primary brands, products.	6, 7	●	●	
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	108, 109	●	●	
2.4	Location of organization's headquarters.	106, 108, 109	●	●	
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	108, 109	●	●	
2.6	Nature of ownership and legal form.	28	●	●	
2.7	Markets served.	6, 7, 39-43	●	●	
2.8	Scale of the reporting organization.	106	●	●	
2.9	Significant changes during the reporting period regarding size, structure, or ownership.	1, 29	●	●	
2.10	Awards received in the reporting period.	106	●	●	
<b>Report Parameter</b>					
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	1	●	●	
3.2	Date of most recent previous report (if any).	1	●	●	
3.3	Reporting cycle (annual, biennial, etc.)	1	●	●	
3.4	Contact point for questions regarding the report or its contents.	1, 110	●	●	
3.5	Process for defining report content.	1	●	●	
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers).	1	●	●	
3.7	State any specific limitations on the scope or boundary of the report (see completeness principle for explanation of scope).	1	●	●	
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	1	●	●	
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report.	Explained for each index	●	●	
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement.	Explained for each index	●	●	
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	1	●	●	Information on Chinese Subsidiaries in Kwangzhou and Bohai is added.
3.12	Table identifying the location of the Standard Disclosures in the report.	96-98	●	●	
3.13	Policy and current practice with regard to seeking external assurance for the report.	1	●	●	
<b>Governance, Commitments &amp; Engagement</b>					
4.1	Governance structure of the organization, including committees under the highest governance body.	28-30	●	●	
4.2	Indicate whether the Chair of the highest governance body is also an executive officer.	28-30	●	●	
4.3	For organizations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members.	28-30	●	●	
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	77	◐	◐	
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives and the organization's performance.	dart.fss.or.kr	◐	◐	Refer to Business Reports.
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	28-30	●	●	
4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.	30	●	●	
4.8	Management principles	24-27	●	●	
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	28-30	◐	◐	
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	30	◐	◐	
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization.	31-33	●	●	
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	48, 55, 56, 59, 61	●	●	
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization	106	●	●	
4.14	List of stakeholder groups engaged by the organization.	9	●	●	
4.15	Basis for identification and selection of stakeholders with whom to engage.	9	●	●	
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	9	◐	◐	
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	10,11	●	●	

Profile	Description	Page	● Fully ◐ Partially ○ Not reported N/A Not Applicable	Reported	Remarks
<b>Economic Performance Indicators</b>					
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	39-41	●	●	
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change.	54-57	●	●	
EC3	Coverage of the organization's defined benefit plan obligations.	75	●	●	
EC4	Significant financial assistance received from government.	40	●	●	
EC5	Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation.	70	●	●	
EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	43	◐	◐	
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.	73	●	●	
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	78-85	●	●	
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts.	78-85	●	●	
<b>Environmental Performance Indicators</b>					
EN1	Materials used by weight or volume.	89	◐	◐	
EN2	Percentage of materials used that are recycled input materials.	52	◐	◐	
EN3	Direct energy consumption by primary energy source.	89	◐	◐	
EN4	Indirect energy consumption by primary source.	89, 91	●	●	
EN5	Energy saved due to conservation and efficiency improvements.	56, 90	●	●	
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	44	◐	◐	
EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	57	◐	◐	
EN8	Total water withdrawal by source.	52, 89, 91	●	●	
EN9	Water sources significantly affected by withdrawal of water.	52	●	●	
EN10	Percentage and total volume of water recycled and reused.	52,91	◐	◐	
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	-	N/A	○	No location of operation affects biodiversity.
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	-	N/A	○	It is neither relevant nor applied to our business activities.
EN13	Habitats protected or restored.	-	N/A	○	It is neither relevant nor applied to our business activities.
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.	97	◐	◐	'Biodiversity Protection' is partially considered in the preliminary Environment Impact Assessment on locations of operation.
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	-	N/A	○	It is neither relevant nor applied to our business activities.
EN16	Total direct and indirect greenhouse gas emissions by weight.	53, 90, 91	●	●	
EN17	Other relevant indirect greenhouse gas emissions by weight.	90	◐	◐	
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	56, 90	●	●	
EN19	Emissions of ozone-depleting substances by weight.	97	●	●	No emissions of ozone-depleting substance.
EN20	NOx, SOx, and other significant air emissions by type and weight.	53, 90	●	●	
EN21	Total water discharge by quality and destination.	53, 90	●	●	
EN22	Total weight of waste by type and disposal method.	53, 89	●	●	
EN23	Total number and volume of significant spills.	97	●	●	No harmful chemical spills
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	-	N/A	○	It is neither relevant nor applied to our business activities.
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.	97	●	●	No water body is affected by discharges of waste water.
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	59-61	●	●	
EN27	Percentage of products sold and their packaging materials that are reclaimed by category.	97	◐	◐	Recyclable packing materials are sold to and collected by a recycle company.
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	97	●	●	KRW 3 million of fine
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	57	◐	◐	
EN30	Total environmental protection expenditures and investments by type.	89	◐	◐	

Profile	Description	Page	● Fully Reported ◐ Partially Reported ○ Not reported N/A Not Applicable	Remarks
<b>Labor Practices and Decent Work Performance Indicators</b>				
LA1	Workforce status by employment type, employment contract and region.	73, 92	●	
LA2	Employee hires and the rate by age, gender, and region.	92	●	
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	75	●	
LA4	Percentage of employees covered by collective bargaining agreements.	76	●	
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	76	●	
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	77	●	
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region.	90	●	
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	75	●	
LA9	Health and safety topics covered in formal agreements with trade unions.	77	●	
LA10	Average hours of training per year per employee by employee category	72	◐	
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	72	◐	
LA12	Percentage of employees receiving regular performance and career development reviews.	71-72	◐	
LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	29, 73, 92	●	
LA14	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.	70, 88	◐	
LA15	Return to work and retention rates after parental leave, by gender	98	●	95% of return rate (42 out of 44 persons to be returned)
<b>Human Rights Performance Indicators</b>				
HR1	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening.	26	●	
HR2	Percentage of significant suppliers and contractors that have undergone human rights screening and actions taken.	26	●	
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	98	◐	3,259 employees participating in 'Jeong-Do' Management training in 2011
HR4	Total number of incidents of discrimination and actions taken.	98	●	No records of discrimination in 2011
HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.	76-77	●	
HR6	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor.	70	●	
HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor.	70	●	
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.	-	N/A	Security companies are not a contractor so they are out of scope of management.
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken.	98	●	No records of violation
HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments.	26	◐	
HR11	Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms.	78-86	◐	
<b>Society Performance Indicators</b>				
S01	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.	78-85	●	
S02	Percentage and total number of business units analyzed for risks related to corruption.	26, 32-33	◐	
S03	Percentage of employees trained in organization's anti-corruption policies and procedures.	98	◐	3,259 employees participating in 'Jeong-Do' Management training in 2011
S04	Actions taken in response to incidents of corruption.	98	N/A	No actions was taken against corruption.
S05	Public policy positions and participation in public policy development and lobbying.	69	●	
S06	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	-	N/A	Not relevant to business activities
S07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	68	●	
S08	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	98	●	No records
S09	Operations with significant potential or actual negative impacts on local communities.	33, 49-51	◐	
S010	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.	33, 49-51	●	
<b>Product Responsibility Performance Indicators</b>				
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	63-64	●	
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	63-64	●	
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	64	◐	
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	64	●	
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	64	●	
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	64-65	◐	
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.	64-65	●	
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	65	●	
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	98	●	No records

Report Application Level	C	C+	B	B+	A	A+	
Standard Disclosures	G3.1 Profile Disclosures OUTPUT	Report on : 1.1 2.1-2.10 3.1-3.8, 3.10-3.12 4.1-4.4, 4.14-4.15	Report Externally Assured	Report on all criteria listed for Level C Plus : 1.2 3.9, 3.13 4.5-4.13, 4.16-4.17	Report Externally Assured	Same as requirement for Level B	Report Externally Assured
	G3.1 Management Approach Disclosures OUTPUT	Not Required		Management Approach Disclosures for each Indicator Category		Management Approach Disclosures for each Indicator Category	
	G3.1 Performance Indicators & Sector Supplement Performance Indicators OUTPUT	Report on a minimum of 10 Performance Indicators, including at least one from each of : Economic, Social and Environmental		Report on a minimum of 20 Performance Indicators, at least one from each of Economic, Environmental, Human rights, Labor, Society, Product Responsibility		Report on each G3 and Sector Supplement Indicator with due regard to the Materiality Principle by either : a) reporting on the Indicator or b) explaining the reason for its emission	

**Declaration of GRI G3.1 Guideline Application Level**

This report has been prepared in accordance with the GRI G3.1 Guideline and verified by a third-party institute to meet the level of 'A' in terms of its application of the guideline. LG Chem, therefore, declares that this report conforms to the 'A+' level of the GRI G3.1 Guideline application levels.

# ISO 26000 Core Subjects

Core Subject	Issue	Description	Page
Organizational Governance	Decision-making processes and structures	An organization's decision-making processes and structures should enable it to keep track of the implementation of decisions to ensure that these decisions are followed in a socially responsible way and to determine accountability for the results of the organization's decisions and activities	28-30
		Create and nurture an environment and culture in which the principles of social responsibility are practised	28
		Use financial, natural and human resources efficiently	28
		Balance the level of authority, responsibility and capacity of people who make decisions on behalf of the organization	28-30
		Keep track of the implementation of decisions	28, 29
Human Rights	Due diligence	Exercise due diligence to identify, prevent and address actual or potential human rights impacts resulting from their activities or the activities of those with which they have relationships	26
	Human rights risk situations	Organizations should take particular care when dealing with situations characterized above. These situations may require an enhanced process of due diligence to ensure respect for human rights	26
	Avoidance of complicity	Verify that its security arrangements respect human rights and are consistent with international norms and standards for law enforcement	65
		Security personnel should be adequately trained, including in adherence to standards of human rights	65
		Not enter into a formal or informal partnership or contractual relationship with a partner that commits human rights abuses	66
	Resolving grievances	Establish, or otherwise ensure the availability of, remedy mechanisms	75
	Discrimination and vulnerable groups	Ensure that it does not discriminate against anyone else with whom it has any contact or on whom it can have an impact	70-71
		Consider facilitating the raising of awareness of their rights among members of vulnerable groups	70-71
	Civil & political rights	Respect all individual civil and political rights	76-77
	Economic, social & cultural rights	Respect these rights of stakeholders	10-13
	Fundamental principles and rights at work	Ensure that it addresses freedom of association and collective bargaining, forced labour, and child labour	70, 71, 76, 77
		Ensure equal opportunities and non-discrimination	70, 71
Employment and employment relationships	Ensure equal opportunities for all workers and not discriminate either directly or indirectly in any labour practice	70, 71	
Conditions of work and social protection	Provide wages and other forms of remuneration in accordance with national laws, regulations or collective agreements	71	
	Provide decent conditions of work with regard to wages, hours of work, weekly rest, holidays, health and safety, maternity protection and ability to combine work with family responsibilities	70, 71, 75	
Social dialogue	Recognize the importance for organizations of social dialogue institutions, including at the international level, and applicable collective bargaining structures	76, 77	
Labour practices	Health and safety at work	Develop, implement and maintain an occupational health and safety policy	47, 48
		Analyse and control the health and safety risks involved in its activities	47, 48
		Communicate the requirement that workers should follow all safe practices and ensure that workers follow the proper procedures	48
	Provide the safety equipment needed, for the prevention of occupational injuries, diseases and accidents, as well as for dealing with emergencies	47, 48	
	Record and investigate all health and safety incidents and problems	47, 48	
Provide adequate training to all personnel on all relevant matters	48		
Human development and training in the workplace	Provide all workers with access to skills development, training and apprenticeships, and opportunities for career advancement, on an equal and non-discriminatory basis	71, 72, 74	
The environment	Prevention of pollution	Identify the aspects and impacts of its decisions and activities on the surrounding environment	47-61
		Identify the sources of pollution and waste related to its activities	52, 53
		Measure, record and report on its significant sources of pollution and reduction of pollution, water consumption, waste generation and energy consumption	52, 53, 89-92
		Implement measures aimed at preventing pollution and waste, using the waste management hierarchy, and ensuring proper management of unavoidable pollution and waste	52, 53
		Disclose the amounts and types of relevant and significant toxic and hazardous materials used and released, including the known human health and environmental risks of these materials for normal operations as well as accidental releases	58-61, 89-92
		Identify and avoid the use of banned chemicals defined by national law or of unwanted chemicals listed in international conventions	59-61
		Implement an environmental accident prevention and preparedness programme and prepare an emergency plan covering accidents and incidents both on- and off-site and involving workers, partners, authorities, local communities and other relevant stakeholders	14-15, 32, 48

Core Subject	Issue	Description	Page
The environment	Sustainable resource use	Identify the sources of energy, water and other resources used, and measure, record and report on its significant uses of energy, water and other resources	52, 53, 89-92
		Implement resource efficiency measures to reduce its use of energy, water and other resources	49, 50, 54, 58, 59
		Reuse water as much as possible, manage water resources to ensure fair access for all users within a watershed	52, 53
	Climate change mitigation and adaptation	Identify the sources of direct and indirect accumulated GHG emissions and measure, record and report on its significant GHG emissions	54-57, 90, 91
		Implement optimized measures to progressively reduce and minimize the direct and indirect GHG emissions	54-57
		Review the quantity and type of significant fuels usage within the organization and implement programmes to improve efficiency and effectiveness	54-57, 89-92
		Consider future global and local climate projections to identify risks and integrate climate change adaptation into its decision making	54-57
	Protection of the environment, biodiversity and restoration of natural habitats	Identify potential adverse impacts on biodiversity and ecosystem services and take measures to eliminate or minimize these impacts	50
		Consider that wild animals and their habitats are part of our natural ecosystems and should therefore be valued and protected and their welfare taken into account	50
	Fair operating practices	Anti-corruption	Identify the risks of corruption and implement and maintain policies and practices that counter corruption and extortion
Ensure its leadership sets an example for anti-corruption and provides commitment, encouragement and oversight for implementation of the anti-corruption policies			26
Raise the awareness of its employees, representatives, contractors and suppliers about corruption and how to counter			26
Responsible political involvement		Encourage its employees, partners, representatives and suppliers to report violations of the organization's policies and unethical and unfair treatment by adopting mechanisms that enable reporting	26
		Organizations can support public political processes and encourage the development of public policy that benefits society at large	Not material
		Conduct its activities in a manner consistent with competition laws and regulations	68, 69
Fair competition	Establish procedures and other safeguards to prevent engaging in or being complicit in anti-competitive behavior	26, 68, 69	
	Promote employee awareness of the importance of compliance with competition legislation and fair competition	26, 68, 69	
Promoting social responsibility in the value chain	Carry out appropriate due diligence and monitoring of the organizations with which it has relationships, with a view to preventing compromise of the organization's commitments to social responsibility	68, 69	
	Consider providing support to SMOs, including awareness raising on issues of social responsibility and best practice and additional assistance	67	
Respect for property rights	Not engage in activities that violate property rights, including misuse of a dominant position, counterfeiting and piracy	65	
Consumer issues	Fair marketing, factual and unbiased information and fair contractual	Openly disclose total prices and taxes, terms and conditions of the products and services	68, 69
		Take actions to provide products and services that are safe and convey vital safety information	63, 64
	Protecting consumers' health and safety	Minimize risks in the design of products	58, 59, 63, 64
		Adopt measures that prevent products from becoming unsafe through improper handling or storage while in the care of consumers	63, 64
	Sustainable consumption	Offer consumers socially and environmentally beneficial products and services considering the full life cycle	58, 59, 60
	Consumer service, support, and complaint and dispute resolution	Review complaints and improve practices in response to complaints	63, 64
		Make it a rule to respond to complaints as soon as possible	63, 64
		Get product-liability insurance to effectively respond to customers in case of loss	63, 64
	Consumer data protection and privacy	Protect personal data by adequate security safeguards	65
	Access to essential services	Essential services should not disconnect essential services for non-payment without providing the consumer or group of consumers with the opportunity to seek reasonable time to make the payment	Not material
Education and awareness	In educating consumers, an organization, when appropriate, should address health and safety, including product hazards, and product and service labelling and information provided in manuals and instructions	63-65	
Community involvement and development	Community involvement	Encourage and support people to be volunteers for community service	78-85
	Education and culture	Promote learning opportunities for vulnerable or discriminated groups	78-85
	Employment creation and skills	Analyse the impact of its investment decisions on employment creation and, where economically viable, make direct investments that alleviate poverty through employment creation	73, 74
	Technology development and access	Consider engaging in partnerships with organizations, such as universities or research laboratories, to enhance scientific and technological development	44, 45
	Wealth and income creation	Consider the economic and social impact of entering or leaving a community	43
Health	Fulfil its tax responsibilities	41, 88	
	Seek to eliminate negative health impacts of any production process, product or service provided by the organization	58-61	
	Social investment	Consider partnering with other organizations, including government, business or NGOs to maximize synergies and make use of complementary resources, knowledge and skills	78-85

# EICC Checklist

Category	Description	Page	
<b>CB-Basic Company</b>	CB1-Customer Designation	Information on whether a company manufactures products or produces consumer goods	6, 7
	CB2-Company Contact Information	Company name, mailing address and contact name	1, 104, 108
	CB3-Supplier Company Principal business type 1 Characteristics	Principal business type	6, 7
		Company ownership structure	28
		Total number of employees	104
		Annual sales revenue	104
	Countries where the company has operating and manufacturing facilities	104-107	
<b>CL-Labor Management and Ethical Conduct</b>	CL1-Management Accountability for Labor & Ethics	Management representative	4, 5
		Relevant awards received	104
		Membership in relevant organizations	104
	CL2-Labor and Ethics Policy & Procedures	Establishment and application of labor policy/ethics policy, sharing of the policy within organization, the scope of the policy, application of the policy to the suppliers	27, 68, 69, 76
	CL3-Labor/Ethics Management System Status	A management systems approach for labor	76
		A management systems approach for ethics	26
Labor and ethics management certification		26, 70	
Freely chosen employment, child labor avoidance, working hours, wages and benefits, humane treatment, non-discrimination, freedom of association		70-77	
Business integrity, no improper advantage, transparent disclosure of information, fair business practices, protection of identity		26, 65, 66, 68, 69	
	Establishment of a system to ensure continuous improvement in labor and ethics management	26, 76, 77	
CL4-Labor/Ethics Management System Elements	A tracking system for monitoring relevant practices	26, 76, 77	
	Performance objectives for labor/ethics issues, internal audits and assessments, preventive measures and stakeholder communication	26, 68, 69, 76, 77	
<b>CH-Health, Safety and Environmental Management</b>	CH1-Management Accountability and History for HS&E	Management representative	4, 5
		Relevant awards received	104
		Relevant incidents occurred	90
	CH2-Health, Safety and Environmental (HS&E) Policy and Procedures	Establishment and application of a HS&E policy, sharing of the policy within organization, the scope of the policy, application of the policy to the suppliers	27, 47, 48, 54-57
	CH3-HS&E Management System Status	HS&E management system certification	47, 59, 60, 63, 64, 91
		A management system approach for HS&E	27, 47
		The scope and the level of application of HS&E management	32, 48-53
		A tracking system for monitoring relevant regulations	47, 48, 58, 59
CH4-HS&E Management System Elements	Performance objectives for HS&E issues, internal audits and assessments, preventive actions and stakeholder communication	48	
<b>FB-Basic Facility Information</b>	FB1-Customer Designation	Equivalent to CB1-CB3	1, 6, 7, 28, 104, 106-108
	FB2-Supplier Facility Contact Information	Equivalent to CB 3	6, 7, 28, 104, 106, 107
	FB3-Supplier Facility Characteristics	Equivalent to CB3	6, 7, 28, 104, 106, 107
<b>FL-Labor Management and Ethical Conduct</b>	FL1-Facility Contact Information for Labor and Ethics	Equivalent to CB2	1, 109
	FL2-Management Accountability and History	Management representative	4, 5
		Violations and corrective actions taken	68
		Relevant policies and their scope	70, 76
	FL3-Labor and Ethics Policy & Procedures	Employment of temporary contract workers	-
		Application to suppliers	66
	Community assistance programs, supporting education	79, 81, 82	
FL4-Freely Chosen Employment	Systematic procedures for foreign workers and retirement	73	

Category	Description	Page		
<b>FL-Labor Management and Ethical Conduct</b>	FL5-Child Labor Avoidance	Regulations, procedures and information management regarding child labor avoidance	68	
	FL6-Working Hours	Compliance with a legal limit on working hours	68	
	FL7-Wages and Benefits	An appropriate level of wage payment and welfare benefits	71, 75	
	FL8-Humane Treatment	Prevention of harassment, coercion, threatening behavior and abuse against workers	70	
	FL9-Non-Discrimination	Ensuring and applying anti-discrimination 60	70, 71	
	FL10-Freedom of Association	Ensuring workers to create or join labor organizations	76	
	FL11-Ethical Business Practices	Ensuring prevention of bribery/corruption, promoting fair trade	26, 68, 69	
	FL12-Facility Labor/Ethics Management System Status	Relevant certification and continuous improvement procedures	26, 76	
	FL13-Labor/Ethics Management System Elements	Equivalent to CL4	26, 68, 69, 76, 77	
	<b>FH-Health, Safety and Environmental Management</b>	FH1-Facility Contact Information for HS&E	Equivalent to CB1-CB3	1, 6, 7, 28, 104, 106, 107, 110
		FH2-Management Accountability and History for HS&E	Equivalent to CH1	4, 5, 90, 104
		FH3-Health, Safety and Environmental (HS&E) Policy & Procedures	Equivalent to CH2	27, 47, 48
FH4-Occupational Safety and Machine Safeguarding		Preventive measures to prepare for possible safety hazards in the production process	31, 32, 47, 78	
FH5-Emergency Preparedness		Prevention and response programs for emergency situations	31-33, 48	
FH6-Occupational Injury/Illness and Physically Demanding Work		Assistance for preventing occupational injuries and illnesses, including insurance coverage	32, 75	
FH7-Industrial Hygiene		Chemical materials management and worker safety	60, 61	
FH8-Living Conditions		Welfare benefits and supportive facilities for workers	75	
FH9-Environmental Permits		Responding to government requirements for environmental permits	52, 53	
FH10-Pollution Prevention		Pollution and waste management and reduction efforts, energy management	52, 53, 54	
FH11-Hazardous Substances		Safety management when handling hazardous substances	59, 60	
FH12-Wastewater & Solid Waste		Wastewater management and waste treatment	52, 53	
FH13-Airborne Emissions	Programs for managing airborne emissions and reducing greenhouse gases	53, 55-57		
FH14-Product Content	Effort for improving environmental performance of products and eliminating hazardous materials from products	58-61, 63, 64		
FH15-Facility HS&E Management System Status	Equivalent to CH2	27, 47, 48, 67		
FH16- HS&E Management System Elements	Equivalent to CH4	47, 48, 58, 59		

※ Electronic Industry Code of Conduct (EICC): A code of conduct applied to the electronics industry, with an aim to build a safer workplace, promote dignity of the workers and induce environmentally sustainable business practices across the supply chain. An identical set of checklists are applied to not only the electronics industry, but also upstream chemical and materials companies to demand soundness in labor, ethics and environmental practices of the businesses.

※ C: Company level, F: Facility level

# Glossary

Glossary	Description
<b>Act on the Registration and Evaluation of Chemicals</b>	"Unlike the previous Act on the Control of Hazardous Chemicals that required the hazard evaluation of new substances only, the new Act mandates the analysis, evaluation, reporting and registration of all chemicals used in Korea"
<b>ABS</b>	Thermoplastic resins formed from three types of monomers-Acrylonitrile, Butadiene, and Styrene
<b>AEO (Authorized Economic Operator)</b>	A party involved in the international movement of goods in whatever function that has been approved by or on behalf of a national Customs administration as complying with supply chain security standards
<b>Basic petrochemicals</b>	Chemicals, such as ethylene, propylene, benzene and toluene, derived from petroleum or natural gas and used to produce synthetic resin, synthetic fiber and synthetic rubber
<b>Cartel</b>	An agreement amongst competing firms where a business operator, resorting to contract, agreement, resolution or any other methods, consents with other operators to conduct an unfair act that limits competition, or referring to an act of forcing other business operators to engage in unfair practices to limit competition
<b>CDM (Clean Development Mechanism)</b>	One of the flexibility mechanisms defined in the Kyoto Protocol that allows industrialized countries to meet part of their caps using certified emission reductions from CDM emission reduction projects in developing countries
<b>CDP (Career Development Program)</b>	A program which allows individuals and organization to design career paths of the individuals together, from the point they were hired all the way to their retirement and manage from a mid-to long-term perspective. At LG Chem, there is an interview-driven career development program targeting all employees as well as CDP specifically targeting key individuals
<b>CHARMs (Chemical Assurance and Regulation Management System)</b>	Chemical assurance and regulation management system in LG Chem, which is based on ERP
<b>COD (Chemical Oxygen Demand)</b>	In environmental chemistry, the chemical oxygen demand (COD) test is commonly used to indirectly measure the amount of organic compounds in water
<b>CP (Compliance Program)</b>	LG Chem's internal system to ensure organizational compliance with fair trade laws. The program takes a proactive approach to prevent legal violation through employee trainings on guidelines for conduct and relevant laws and regulations, while detecting and redressing the problems early on through periodic internal audits
<b>DJSI (Dow Jones Sustainability Index)</b>	The Dow Jones Sustainability Index measures companies' sustainability initiatives. It represents a cooperation of the Dow Jones Indexes and SAM (Sustainability Asset Management)
<b>ERP (Enterprise Resource Planning)</b>	A total information system, designed to ensure efficient management of all human and physical resources in the enterprise used for business activities, with an aim to reinforce business competitiveness
<b>GMI (Global Market Intelligence)</b>	An in-house system that displays information and relevant reports regarding overseas markets, with an aim to support decision making of the management through delivering market/customer information in a timely manner
<b>Golden Collar (GC) Incentive</b>	Incentives paid to core talents considering their market value
<b>Greenhouse Gas · Energy Target Management System</b>	An agreement in which organizations are set targets for reducing energy consumption by the government
<b>GTG (Gas Turbine Generator)</b>	A machine that extracts energy from a flow of combustion gas for industrial gas turbines like power generation
<b>HEV (Hybrid Electric Vehicle)</b>	A type of hybrid vehicle and electric vehicle which combines a conventional internal combustion engine (ICE) propulsion system with an electric propulsion system
<b>HPI (High Potential Individual)</b>	HPI refers to a system for identifying and nurturing individuals with potential to grow as next generation business leaders. The top 5% of desk job workers are selected, trained, and given reched goal as well as managed for their career growth. As a key talent development system, HPI is linked to succession plans and utilized as a pool for key successor candidates
<b>IDS/IPS (Intrusion Detecting System/ Intrusion Prevention System)</b>	IDS : Intrusion Detecting System, IPS : Intrusion Prevention System
<b>IFRS (International Financial Reporting Standards)</b>	Principles-based standards, interpretations and the framework (1989) adopted by the International Accounting Standards Board (IASB)
<b>ISO 14001</b>	International standards for environmental management system, developed by International Organization for Standardization (ISO)
<b>KOSHA 18001</b>	As the rules for certification for safety and health management system, KOSHA 18001 was developed by Korea Occupational Safety and Health Agency (KOSHA), building on UK's BS8800 for safety and health management system and Europe's OHSAS 18001 for occupational safety and health management certification as a foundation
<b>KRI (Key Risk Indicator)</b>	An indicator showing a probability and an exposure level of a risk
<b>LCA (Life Cycle Assessment)</b>	A technique for assessing environmental performance of a product-by quantifying the amount of energy and materials consumed and emitted from the lifecycle of a product-from raw material, manufacture, use to disposal- to evaluate their impact on the environment and seek ways to improve the environment
<b>Matching Grant</b>	A scheme where the company matches the fund raised by their employees for helping the needy neighbors

Glossary	Description
<b>MBO (Management By Objective )</b>	A process of defining objectives within an organization so that management and employees agree to the objectives and understand what they need to do in the organization
<b>MOU (Memorandum of Understanding)</b>	A written document of an agreement before a formal contract is signed between organizations
<b>MSDS (Material Safety Data Sheet)</b>	A document that contains information on how to work safely with chemical materials, including descriptions on the name of the chemical material, their physical chemical properties, hazards, risks, emergency procedures in the case of explosion or fire, and their environmental impact
<b>NCC (Naphtha Cracking Center)</b>	Naphtha Cracking Center is the plant with facilities for pyrolyzing naphtha to produce petrochemical feedstocks like ethylene and propylene
<b>OHSAS 18001</b>	A set of standards established to systematically introduce workplace safety and health management system, comprising relevant audit standards and guidelines
<b>OLED (Organic Light Emitting Diodes)</b>	A light-emitting diode (LED) in which the emissive electroluminescent layer is a film of organic compounds which emit light in response to an electric current
<b>On-Spot Incentive</b>	Incentives given on-spot when individuals achieve their performance targets, in the range of 50-500% of their base pay
<b>Outreach Program</b>	An outreach program of a chemical industry refers to a diverse set of social contribution activities and chemistry-related events to reach out to the general public such as local residents, as well as children and the youth, who will be our customers in the future. They are designed to increase the public understanding and familiarity of chemistry and highlight the importance of the chemical industry, with an ultimate aim to build a better image and a deeper trust for the chemistry industry
<b>PSM (Process Safety Management)</b>	A process is any activity or combination of activities to prevent serious industrial accident caused by the use, storage, manufacturing, handling or the on-site movement of highly hazardous chemicals such as leakage, fire and explosion which likely do damage to workers or neighboring communities.
<b>PVC (Polyvinyl Chloride)</b>	Polyvinyl chloride is a polymer created from the alkene monomer vinyl chloride (CH <sub>2</sub> =CHCl)
<b>QC (Quality Control)</b>	A control to ensure the quality of a product be maintained and enhanced through applying scientific principles
<b>RC (Responsible Care)</b>	A voluntary initiative under which companies and the government work together to continuously improve their health, safety and environmental performance, with a sense of responsibility to address concerns from local communities, based on a belief that all companies can continue to exist only when there is an endorsement from the public
<b>REACH (Registration, Evaluation, Authorization and Restriction of Chemicals)</b>	A new system for gathering information, assessing the risks of chemicals to human health and the environment, and authorizes or restricts the marketing and use of chemicals produced or supplied in the EU Member States
<b>RoHS (Restriction of Hazardous Substances Directive)</b>	A set of criteria formulated by the European Union (EU) to regulate the use of toxic materials in electrical and electronic devices, systems, and toys
<b>RTO (Regenerative Thermal Oxidizer)</b>	An industrial process for the treatment of exhaust air. The system uses a bed of ceramic material to absorb heat from the exhaust gas and use the captured heat to preheat the incoming process gas stream and destroy air pollutants emitted from process exhaust streams at high temperatures
<b>SAP (Super Absorbent Polymer)</b>	Upper Absorbent Polymer
<b>SSL (Secure Socket Layer)</b>	A security protocol that is today's de-facto standard for securing communications and transactions across the Internet
<b>TFT LCD (thin film transistor liquid crystal display)</b>	A variant of liquid crystal display (LCD) which uses thin-film transistor (TFT) technology to improve image quality. TFT LCDs are used in television sets, computer monitors, mobile phones, handheld video game systems, personal digital assistants, navigation systems, projectors, etc.
<b>TRI (Toxics Release Inventory)</b>	A system which requires companies to report the total amount of toxic chemicals that are released to air, water and soil or disposed by the waste/waste water disposal company over the entire production process to the Ministry of Environment
<b>UL (Underwriter's Laboratories)</b>	Independent, not-for-profit product safety testing and certification organization
<b>WWT (Waste Water Treatment)</b>	Waste Water Treatment
<b>3D FPR(Film Patterned Retarder)</b>	A technology in which a polarized film is placed on the 3D television screen that, along with the 3D glasses, separates the left and right images before they are delivered to the brain

# Company Profile

## OVERVIEW

LG Chem is striving to become a global solution partner who helps facilitate the success of customers by providing the best technologies.

Company Overview		Financial Snapshot <small>(Unit: KRW 100 million)</small>	
Name	LG Chem, Ltd.	Total Assets	134,190
Headquarters	LG Twin Towers, 20 Yeouido-dong, Yeongdeungpo-gu, Seoul, South Korea	Total Liabilities	43,174
Foundation	January, 1947	Total Shareholders' Equity	91,016
Employees	18,455 persons (10,775 in Korea, 7,680 overseas)	Sales	226,756
		Operating Income	28,354
		Net Income	21,697

## AFFILIATION WITH MAJOR EXTERNAL ORGANIZATIONS & ASSOCIATIONS

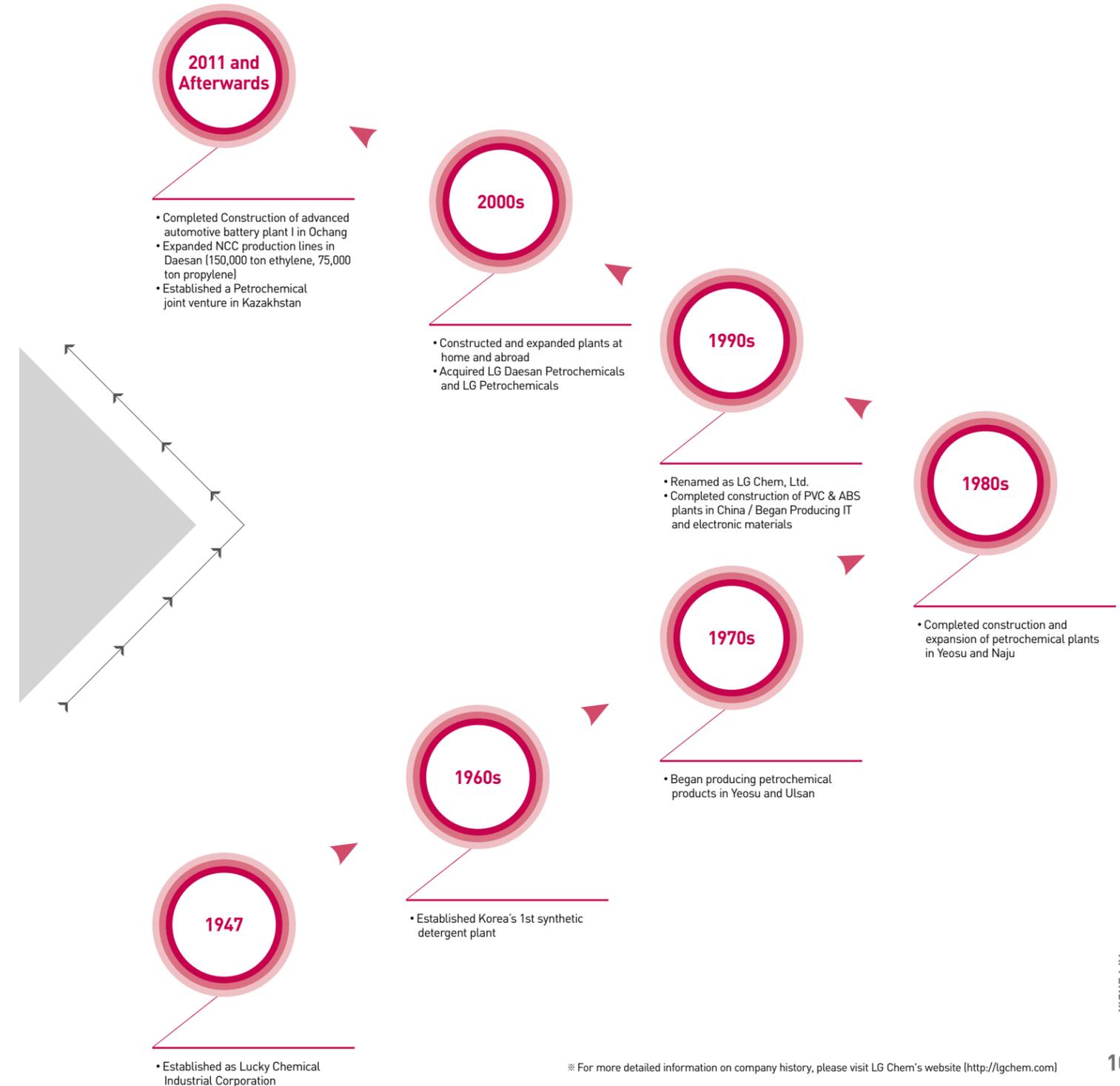
Korea Business Council for Sustainable Development (KBCSD)	Business Ethics and Sustainability Management for Top Performance	Korea Association of Green Companies	Other Industry Associations
<ul style="list-style-type: none"> <li>• Drive sustainable development at a global level</li> <li>• Build partnership with WBCSD</li> </ul>	<ul style="list-style-type: none"> <li>• A multilateral forum for disseminating ethical management practices and corporate culture</li> <li>• Launched by the Institute for Policy Studies (IPS)</li> <li>• Exchange of ethical management practices and information</li> </ul>	<ul style="list-style-type: none"> <li>• A group of companies designated as Green Company</li> <li>• Promote environmental management through seminars and workshops</li> <li>• Yeosu, Cheongju, Ochang, Ulsan, Naju and Iksan plants</li> </ul>	<ul style="list-style-type: none"> <li>• Korea Petrochemical Industry Association, Korea Chemical Industry Council, Korea Chemicals Management Association, Korea Petrochemical Industry Association, Korea Chemical Management Association, Korea Fair Competition Foundation etc.</li> </ul>

## LIST OF AWARDS RECEIVED

- Grand prize at '2010 CEO Award'
- '2010 Corporation of the Year' by General Motors
- '2011 CEO of the Year Award' by Korea Management Association
- 'The First and Best Company Award' by Korean Academic Society of Business Administration
- 'IR52 Jang Young Shil Award'
- 'Engineer Award of This Month'
- The Management Grand Awards Hall of Fame for HR Development in 2011
- Gold Prize at 'Korean Technology Awards'
- Grand Prize at 'Money Today IT Awards'
- Grand Prize at 2011 'Korea's Best Company Award' in the Manufacturing Category
- Included into 'DJSI Asia-Pacific' and 'DJSI Korea' for Three Consecutive Years
- Korea's Best Chemical Company Selected by DJSI
- Frost & Sullivan Korea Excellence Award - 'This Year's Advanced Automotive Battery Manufacturer'
- Nokia Supplier Award - 'Best Quality Supplier'

# Company History

Our innovative technology, abundant experience, and unique know-how is not built up overnight. Since 1970s, LG Chem has produced and provided innovative materials and solutions around the world that is necessary for the development of high quality petrochemical and IT & electronic material industries and the convenience of life. Going forward, we will remain committed to a sustainable growth as well as environmental and social performance.

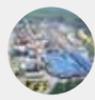
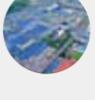


※ For more detailed information on company history, please visit LG Chem's website (<http://lgchem.com>)

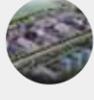
# Locations of Operation



## • Locations of Operation in Korea

 <p><b>Research Park</b></p> <ul style="list-style-type: none"> <li>Established in 1979</li> <li>104-1 Moonji-Dong, Yooseong-Gu, Daejeon City</li> <li>Area: 85,530m<sup>2</sup></li> <li>Products: New materials research &amp; development</li> </ul>	 <p><b>Yeosu Plant</b></p> <ul style="list-style-type: none"> <li>Established in 1976 (Hwachil), 1991 (Yongseong)</li> <li>70-1 Hwachil-Dong, Yeosu City, Jeongnam</li> <li>Area: 991,735m<sup>2</sup></li> <li>Products: Ethylene, Propylene, PE, BTX, PVC, ABS, VCM, Acrylate, Specialty Polymers/BPA</li> </ul>
 <p><b>Gimcheon Plant</b></p> <ul style="list-style-type: none"> <li>Established in 2008</li> <li>1348-1 Daegwang-Dong, Gimcheon City, Gyeongbuk</li> <li>Area: 24,800m<sup>2</sup></li> <li>Products: Super Absorbent Polymers (SAP)</li> </ul>	 <p><b>Ulsan Plant</b></p> <ul style="list-style-type: none"> <li>Established in 1974</li> <li>388 Mangyang-li, Onyang-Eup, Ulju-Gun, Ulsan City</li> <li>Area: 12,161m<sup>2</sup></li> <li>Products: Plasticizers</li> </ul>
 <p><b>Naju Plant</b></p> <ul style="list-style-type: none"> <li>Established in 1984</li> <li>1 Songwol-Dong, Naju City, Jeonnam</li> <li>Area: 562,793m<sup>2</sup></li> <li>Products: Octanol, Butanol, Plasticizers, Acrylic Acids</li> </ul>	 <p><b>Iksan Plant</b></p> <ul style="list-style-type: none"> <li>Established in 1991</li> <li>599 Yongje-Dong, Iksan City, Jeongbuk</li> <li>Area: 94,636m<sup>2</sup></li> <li>Products: ABS Compounds, Engineering Plastics, etc.</li> </ul>
 <p><b>Daesan Plant</b></p> <ul style="list-style-type: none"> <li>Established in 2005</li> <li>697 Daejuk-Li, Daesan-Eup, Seosan City, Choongnam</li> <li>Area: 1,297,477m<sup>2</sup></li> <li>Products: VCM, PVC, Ethylene, Propylene, Benzene, BD, PE, PP, Synthetic Rubbers, etc.</li> </ul>	 <p><b>Cheongju Plant</b></p> <ul style="list-style-type: none"> <li>Established in 1980</li> <li>150 Songjeong-Dong Hongdeok-Gu, Cheongju City, Choongbuk</li> <li>Area: 226,490m<sup>2</sup></li> <li>Products: Advanced automotive batteries, Polarizers</li> </ul>
 <p><b>Ochang Plant</b></p> <ul style="list-style-type: none"> <li>Established in 2005</li> <li>1114-1 Namchon-Li, Oksan-Myeon, Cheongwon-Gun, Choongbuk</li> <li>Area: 248,209m<sup>2</sup></li> <li>Products: Advanced automotive batteries, Optical Materials, etc.</li> </ul>	 <p><b>Paju Plant</b></p> <ul style="list-style-type: none"> <li>Established in 2011</li> <li>Neungsan-Li 658, Wollong-Myeon, Paju-Si, Gyeonggi-Do</li> <li>Area: 390,000m<sup>2</sup></li> <li>Products: LCD glass substrate</li> </ul>

## • Locations of Operation in China

 <p><b>LGCCI</b></p> <ul style="list-style-type: none"> <li>Established in 2004</li> <li>Investment company sales subsidiary</li> <li>Located in Beijing</li> </ul>	 <p><b>LGCE BJ</b></p> <ul style="list-style-type: none"> <li>Established in Dec. 28, 2004</li> <li>Products: Polarizer for TFT-LCD</li> <li>Located in Beijing</li> </ul>
 <p><b>LGCE NJ</b></p> <ul style="list-style-type: none"> <li>Established in July, 2003</li> <li>Products: Rechargeable, Battery, Polarizers</li> <li>Located in Nanjing</li> </ul>	 <p><b>LGCC GZ</b></p> <ul style="list-style-type: none"> <li>Established in 2002</li> <li>Products: EP</li> <li>Located in Guangzhou</li> </ul>
 <p><b>LG DAGU</b></p> <ul style="list-style-type: none"> <li>Established in December, 1995</li> <li>Products: PVC</li> <li>Located in Tianjin</li> </ul>	 <p><b>LG BOHAI</b></p> <ul style="list-style-type: none"> <li>Established in January, 2005</li> <li>Products: PVC</li> <li>Located in Tianjin</li> </ul>
 <p><b>LGCC TJ</b></p> <ul style="list-style-type: none"> <li>Established in December, 2004</li> <li>Products: LUPOY, LUPOX, LUPOL, LUMID, ABS etc.</li> <li>Located in Tianjin</li> </ul>	 <p><b>LG BOTIAN</b></p> <ul style="list-style-type: none"> <li>Established in 2009</li> <li>Products: SBS</li> <li>Located in Tianjin</li> </ul>
	 <p><b>LG YX</b></p> <ul style="list-style-type: none"> <li>Established in March, 1997</li> <li>Products: ABS, SAN, SBL</li> <li>Located in Ningbo</li> </ul>

## Overseas Production Subsidiaries

NAME	LOCATION
Tianjin LG Dagou Chemical Co., Ltd.	Tianjin
Tianjin LG Bohai Chemical Co., Ltd.	Tianjin
Tianjin LG Botian Chemical Co., Ltd.	Tianjin
Ningbo LG Yongxing Chemical Co., Ltd.	Ningbo
LG Chemical (Guangzhou) Engineering Plastics Co., Ltd.	Guangzhou
LG Chem (Tianjin) Engineering Plastics Co., Ltd.	Tianjin
LG Chem (Nanjing) Information & Electronics Materials Co., Ltd.	Nanjing
LG Chem Display Materials (Beijing) Co., Ltd.	Beijing
LG Chem (Taiwan), Ltd.	Taipei
LG Chem, Poland Sp. z o.o.	Wroclaw
LG Polymers India Private Ltd.	Mumbai, Vizag
LG VINA Chemical Company Ltd.	Ho Chi Minh
LG Chem Michigan Inc.	Holland
CNOOC & LG Petrochemicals Co., Ltd.	Huizhou

## Overseas Sales Subsidiaries

NAME	LOCATION
	Beijing
	Shanghai
	Guangzhou
	Nanjing
LG Chem China Investment Co., Ltd.	Chongqing
	Qingdao
	Shenzhen
	Yantai
LG Chem Hong Kong Ltd.	Hong Kong
LG Chemical India Private Ltd.	New Delhi
	New York
	Los Angeles
LG Chem America, Inc.	San Jose
	Austin
	Houston
LG Chem Brasil, Ltd.	Sao Paulo
LG Chem Europe GmbH	Frankfurt

## Overseas Branches Subsidiaries

NAME	LOCATION
LG Chem, Ltd. Moscow Office	Moscow
LG Chem, Ltd. Istanbul Office	Istanbul
LG Chem, Hochiminh Office	Ho Chi Minh
LG Chem, Ltd. Bangkok Representative Office	Bangkok
LG International Japan Ltd.	Tokyo
LG Chem, Jakarta Office	Jakarta
LG Chem, Singapore Office	Singapore

## R&D Subsidiaries

NAME	LOCATION
Compact Power Inc.	Troy
LG Chem, Ltd. Japan R&D Center	Tokyo

# Participant Information

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LG Chem 2011 Sustainability Report is prepared with a hope that more stakeholders see, feel, and share our commitment to sustainability management and performance.

Going forward, we will describe how LG Chem continues to contribute to the sustainable development of the economy, environment and society openly and faithfully so as to show you LG Chem growing further.