

A child with dark hair, wearing a blue patterned shirt, is seen from behind, reaching up to draw on a whiteboard. The whiteboard is covered in colorful, abstract lines and shapes. On the left side, there are several overlapping loops in shades of pink and purple. A green line extends from the bottom left towards the center, ending in a small green plant with three leaves. At the bottom of the whiteboard, there are colorful, stylized flowers in shades of purple, yellow, and green. The background is a light, textured surface.

# Life's Good... when it's green

2008 ENVIRONMENTAL REPORT

## Life's Good... when it's green

LG Electronics' environmental policy is centered on its "Life's Good when it's green" program. The "Life's Good when it's green" program is divided into two areas of emphasis: pre-production and post-production. LG Electronics' goal is to reduce greenhouse gases in the pre- and post-production stages by 150,000 tons and 30,000,000 tons, respectively, by 2020. LG Electronics' reduction of greenhouse gases emitted during a product's life cycle (including raw materials used in production, product distribution, product usage, and product disposal) will be carried out in stages.

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# ABOUT THIS REPORT

- Report Outline** ● LG Electronics hopes to promote active environmental communication both inside and outside the company. This report was composed by the LG Electronics Eco Strategy Team with the support and cooperation of both the LG management and the LG Electronics business divisions.
- Reporting Period** ● The reporting period stems from January 1, 2008 to December 31, 2008. Some sections of this report will contain information up until February 28, 2009.
- Scope of the Report** ● The scope of this report includes both domestic (Korean) and overseas information. As there are limitations to gathering data, certain quantitative data is limited to information gathered in Korea. Not all the information contained in this report is applicable to all markets.
- Publication** ● The report was published in July 2009. This report will be distributed in book form and will be open to the public on our homepage located at [www.lge.com](http://www.lge.com).
- Target Audience** ● The target audience of this report includes any and all stakeholders that have an interest in the Environmental performance of LG Electronics.
- Reference Guideline** ● This report has been published using the Environmental Report Guidelines 2007 of the Ministry of Environment of Korea, and the Global Reporting Initiative's (GRI) Sustainability Reporting Guidelines (2006) as references.

This report contains some "forward-looking statements"- that is, statements related to future, not past, events. In this context, forward-looking statements often address our expected future business performance and intentions, and often contain words such as "expect," "anticipate," "intend," "plan," "believe," "seek," "see," or "will." Forward-looking statements by their nature address matters that are, to different degrees, uncertain. These uncertainties may cause our actual future results to be materially different from those expressed in our forward-looking statements in this report.



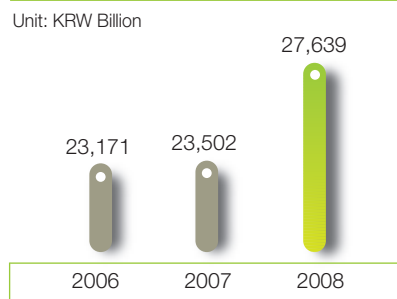
# Corporate Overview

CEO	Yong Nam / Vice Chairman
Address	LG Twin Towers 20, Yeouido-dong, Yeongdeungpo-gu, Seoul, Korea 150-721
Established Date	March 27, 1958

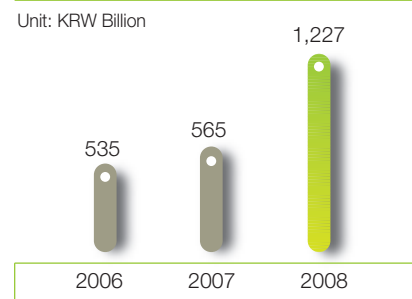
## Corporate Facts

As of the end of December 2008, LG Electronics had 28,659 employees and management located in Korea, and 55,786 employees and management located overseas. Although the overall business environment was difficult in 2008 due to external factors such as the global economic stagnation, material cost increases and enhanced competition, LG Electronics made every effort to improve productivity and reduce material costs in all of its business activities and areas including factory floors, research and development, marketing, service and support. Simultaneously, LG Electronics recorded KRW27,638.5 billion in revenues, an 18% increase over the previous year, as a result of growth in its global revenues due to premium brand rollouts and depreciation of the Korean Won. Operating profits stood at KRW1,226.9 billion.

### Sales



### Operating Income



# Major Products



### Home Entertainment

- LG has become a leading home entertainment company by producing flat panel TVs, home theaters, blu-ray players and other products, and by combining stylish design with smart technology. Our home entertainment products include liquid crystal display (LCD) TVs, plasma display panel (PDP) TVs, audio equipment, video equipment, and optical storage.

### Mobile Communication

- LG provides consumers with better mobile experiences through stylish designs and smart technology, and this has resulted in LG being a global leader and innovator in the worldwide mobile handheld device market.

### Home Appliance

- LG is enhancing users' daily lives with innovative home appliances that combine style and technological excellence. Our portfolio of home appliances includes washing machines, refrigerators, cooking appliances, cleaning appliances, system kitchen appliances, and healthcare appliances.

### Air Conditioning

- LG has expanded beyond residential and commercial markets by increasing its share of the industrial and specialized markets, and by providing heating, ventilation, and optimized air conditioning (HVAC) solutions.

### Business Solution

- LG is quickly becoming a leader in the business to business market for products such as LCD monitors, commercial displays, car infotainment and security devices.





## ENERGY

We understand our social responsibility towards the environment, and LG Electronics is actively taking steps to reduce greenhouse gas emissions.





# HUMAN

LG Electronics attempts to apply eco design concepts to our products with the goal of reducing their overall environmental footprints, and manages hazardous substances through the “Green Program” with our vendors.



A young girl with long brown hair is sitting in a shallow stream, talking on a mobile phone. She is wearing a pink sleeveless top and blue jeans. The stream is surrounded by a rocky bank and green trees in the background. In the foreground, a large, out-of-focus foot is visible, suggesting the perspective of someone sitting nearby. The overall scene is outdoors and appears to be a natural setting.

## RESOURCES

LG Electronics is helping to promote recycling by adopting technologies to reduce the use of natural resources and emphasize the conservation of these resources.



## CEO Message

08

We are striving towards becoming a true global leader through green management to achieve sustainable growth.

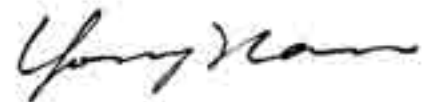


The global economy is currently in a state of uncertainty. Even in the midst of a difficult environment, LG Electronics recorded the best performance in fiscal 2008 since its foundation. This is the result of LG Electronics' effort to continuously innovate and develop superior technologies for our customers.

LG Electronics is implementing activities to achieve eco-friendly management. We have established management systems with the intent of reducing the amount of toxic materials that are used and the amount of greenhouse gas emitted during the manufacturing and management processes. Our employees are committed to reducing waste during manufacturing in order to utilize natural resources more efficiently. Our efforts to support the environment also extend to product development. Our focus is on developing products that are eco-friendly in all phases of their life cycle, including the purchasing of components and materials for product production, manufacturing of the product, using the product, and finally, disposing of the product.

Global warming is one of the core environmental issues we face today, and LG is working to achieve sustainable growth to create a greener future. We will continue to do our best in creating value for customers, shareholders, employees, and management, while at the same time attempting to employ a green philosophy to our products when appropriate.

We continue to look forward to support and encouragement from all those concerned.



**YONG NAM**

Vice Chairman & CEO

# CTO Message

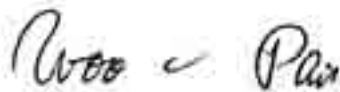
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Sustainable growth is one of the most important factors in environmental preservation. Fortunately, the environmental awareness of our customers is growing. LG Electronics was one of the first Korean consumer electronics (CE) companies to announce its environmental policies in 1994. Since then, we have continuously strived to innovate and develop greener products to enhance the value for our customers, while helping protect the global environment.

We are focused on reducing greenhouse gas emissions throughout the life cycle of our products as a way potentially to counter changes in the climate. We believe we have increased the competitiveness of our products by establishing greenhouse gas emission targets, participating in a trial operation of the Carbon Footprint Labeling program in Korea, establishing an inventory of greenhouse gas emissions in all of our facilities in Korea, and obtaining an international verification from Det Norske Veritas (DNV), a Norway based greenhouse gas verification organization.

Not only are we working to minimize greenhouse gas emissions by improving our products' energy efficiency, we are also doing our best to provide products to our customers that maximize economic efficiency. We are also evaluating and working to decrease our use of hazardous substances. Finally, we have established the Green Program with our vendors.

LG Electronics is taking the lead to create a greener future through eco-friendly technology.



**WOO HYUN PAIK**

President & Chief Technology Officer



# LG Electronics' Eco-friendly Technology



# 2008 Green Highlights

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## 1 GREEN MANAGEMENT

### ● Established the Eco Strategy Team

LG established an Eco Strategy Team in February 2008 that reports directly to the Chief Technology Officer (CTO) and is responsible for establishing a global environmental strategy and overseeing all “green” initiatives of the company.

### ● Establishment of a Voluntary Take-back System for Discarded Products

LG Electronics has established various home electronics take-back programs throughout the world. LG Electronics became one of the first CE companies to establish a national take-back and recycling program in the U.S. in 2008. This program was in partnership with Waste Management, Inc., one of the largest recycling companies in the U.S. We also initiated a take-back program through the mail in some countries as part of our mobile phone take-back and recycle strategy.

### ● Carbon Disclosure Project : Received the Woorim Award

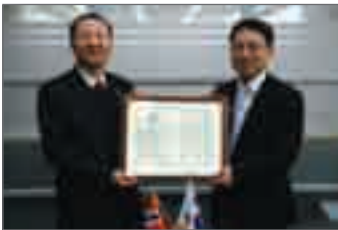
LG Electronics received the Woorim Award by participating in the Sixth Carbon Disclosure Project (CDP). The Woorim Award is a Korean-based award given to the best performer among companies that are participating for the first time in CDP for their efforts in working to reduce greenhouse gas emissions.



• Received the Woorim Award

### ● Established a Green House Gas Inventory for all facilities in Korea and Received Verification from a Third Party

LG Electronics had established a greenhouse gas inventory at all facilities in Korea by the end of 2008, including its research and development centers. LG Electronics received an international verification from Det Norske Veritas (DNV), a Norway based global greenhouse gas verification organization. DNV has specialized in delivering independent, third-party services for climate change activities, and has over the last decade been engaged in a number of diverse validation, verification, and certification activities. For more information on the verification process, visit [http://www.dnv.com/services/certification/climate\\_change/voluntary\\_emission\\_reductions/](http://www.dnv.com/services/certification/climate_change/voluntary_emission_reductions/).



• Green House Gases Verified by a Third Party

### ● Received the 2008 Leading Resource Recycling Company Presidential Award

LG Electronics enhanced resource recyclability at the Changwon Plant 1 by reducing waste and it received the Presidential Award in Korea. Every year, the Ministry of Environment and the Korea Environment & Resources Corporation gives this award to a company that has demonstrated its commitment to working to reduce its waste and increase its use of recycled materials in the production process.



• Received the President's Award as a Leading Resource Recycling Company





## 2 GREENER PRODUCT



• 2008 Energy Winner Award

### ● Projector Receives Korean Eco-label

LG Electronics received the Korean Eco-label in February 2008 for the DX540 and DX630 projectors, a first in the projector category. The Eco-label program is administered by the Korea Eco-Products Institute and is granted to products that reduce consumption of energy and natural resources. These projectors have power saving functions that satisfy the standby-power and power consumption standards which are set by the Korean government. For more information on the Eco-label program, please visit <http://www.koeco.or.kr/>.

### ● LG Electronics' Products Receive "Energy Winners Awards"

In 2008, LG Electronics received several awards from Consumers Korea, a consumer advocacy organization in Korea. The awards included the "Energy Winner Grand Prize" for one of our refrigerators (R-T686UHLW), the "Winner Award" for one of our air cleaners (LA-P210D) in the energy efficiency category, and the "Winner Award" for one of our microwave ovens (MW-237PRS/ PWR) in the standby power category. For more information on Consumers Korea and its awards, please visit <http://www.cacpk.org/>.

### ● LG Electronics' Participated in a Trial Operation of the Carbon Footprint Labeling Program

LG Electronics was the one of the first Korean CE companies to participate voluntarily in the trial Carbon Footprint Labeling program administered by the Korean Ministry of Environment that evaluated the carbon footprint of participating products. At the conclusion of the trial, LG Electronics' Steam Direct Drive washing machine was selected as a "Carbon Footprint Labeling" product. The purpose of Carbon Footprint Labeling is to promote a consumer-led purchasing pattern of low carbon goods and to encourage enterprises to develop technologies towards low-carbon goods, thus ultimately contributing to the international efforts to reduce greenhouse gases. Please visit <http://edp.or.kr/carbon/english>.



\*Washing Machine that participated in a trial operation of the Carbon Footprint Labeling  
Model: FR3228WA

## 3 GREEN COMMUNICATION



• Dubai Conference

### ● LG Electronics Sponsored an Environmental Conference in Dubai

On October 18, 2008, LG Electronics held the "LG Life's Green Conference" at Dubai's Jumeirah Beach Hotel in consortium with UNOPS (United Nations Office for Project Services) and the government of the United Arab Emirates. A "Green Protocol" was signed at the conclusion of the conference where participants pledged to work towards an increased emphasis on environmental initiatives and sustainability.

### ● Participated in the Ramsar Conference as a Corporate Supporter

LG Electronics participated in the Tenth Ramsar Conference held in Changwon, Korea from October 28, 2008 to November 4, 2008. With our Changwon Plant taking the lead, LG Electronics participated in environmental efforts related to the Upo and Joonam Wetlands. We also initiated a "One River One Company Clean-up Program," where each Korean LG facility will help maintain one nearby river or stream.





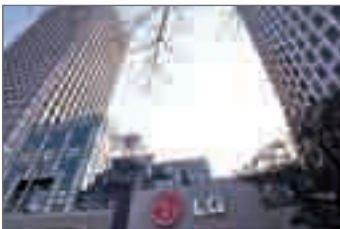
**Our responsibility is to always  
create a bright and clean earth.**



# Green Management System

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Life's Good...  
when it's green



LG Electronics' places a priority on helping protect the global environment and promote a greener lifestyle among its customers.

## Environmental Vision

LG Electronics' vision is to grow into a leading environmentally conscious company by working to protect the global environment and creating products with environmentally friendly features. We first announced our environmental policies in 1994. We have also developed activities to minimize environmental burdens associated with our operations. LG Electronics' environmental strategies are being implemented across the entire value chain. We are especially focused on issues related to green product features, climate change, and recycling.

### LGE'S ENVIRONMENTAL POLICY

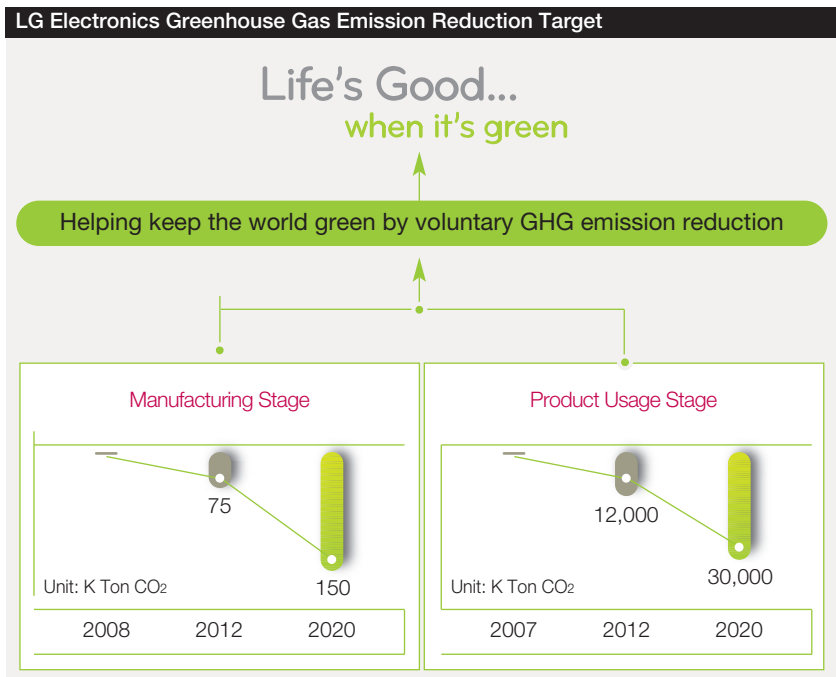
Our environmental strategy is a multi-pronged initiative that includes:

1. Voluntarily working to exceed the requirements of international treaties, international standards, and national laws related to the environment.
2. Implementing greenhouse gas emissions reduction strategies and targets, and sharing these results with stakeholders.
3. Garnering insight from and cooperating with vendors, customers, and environmental organizations.
4. Establishing and continuously examining our environmental management systems for all aspects of our operations, including the supply chain.
5. Recognizing the environmental issues related to each stage of a product's life cycle, from design to disposal, and developing measures to address those issues.
6. Training and educating our employees and the larger community to increase awareness of the environmental issues facing the world today.

## Proclamation Greenhouse Gas Emission Reduction Targets

LG Electronics has voluntarily established greenhouse gas emissions reduction targets and is carrying out various initiatives to achieve these targets in an effort to help mitigate climate change. By 2020, we plan to reduce greenhouse gas emissions by 150,000 tons during the product manufacturing stage and by 30,000,000 tons during the product usage stage.

We established and completed a greenhouse gas inventory for all of our facilities in Korea as the first step to achieving these targets. By the end of 2009, we plan to complete a greenhouse gas inventory in thirty-two overseas facilities. A Green IT system will also be utilized to manage greenhouse gas emissions. Moreover, we plan to reduce greenhouse gas emissions by optimizing and increasing the efficiency of production. We also plan to minimize greenhouse gas emissions at the product usage stage by enhancing energy efficiency in our major products by about 15% by 2012 compared to that of 2007.



### LG Electronics' Company-wide Environmental Council



### Environment Organization

LG Electronics established an Eco Design Committee to discuss ways to increase and improve LG's green strategies. The CTO chairs the committee and chiefs of the research and development centers for each product are appointed as committee members. The Eco Design Committee has three expert subcommittees: the Standardization Expert Committee, the Green Packaging Expert Committee, and the Green Product and CO<sub>2</sub> Expert Committee.

We are committed through our Green Program to green purchasing practices as a part of our Supply Chain Environmental Management strategy. LG Electronics operates this program jointly with our business partners to carry out green purchasing practices at the raw material procurement stage as a way to control the usage of hazardous substances.

## LGE Green Program for Business Partners

Establishing a cooperative effort with our vendors is essential to effectively carrying out environmental management. We cooperate with our suppliers by sharing our experiences with them to help establish environmental management systems in their facilities. We also conduct training programs with our vendors and send our own professionals directly to their facilities to review the facilities and recommend improvements to their environmental management initiatives.

LG Electronics began its Green Program in 2005. This program aims to improve our overall supply chain by sourcing materials from suppliers who are demonstrating a commitment to environmental responsibility, carrying out import inspections, auditing our vendors for "green compliance," and working to continuously improve the quality of our components. In September 2006, we established the LGE Green Program (LGE Green Program) IT system. We have used our LGE Green Program IT System to manage and monitor all certification operations since September 2006. This system allows us to partner with companies that meet LG's high standards.

- **Certification Standards**

Individual components, raw materials, packaging materials, and supplementary materials supplied to LG Electronics must comply with all legal requirements and satisfy our rigorous requirements on maximum allowable concentration levels of harmful substances. In addition, LGE Green Program certification is issued only when our vendors meet our standards for organizing appropriate operational bodies and establishing a green product quality assurance system.

Through these systems, we have been able to manage our environmental policies across the overall value chain. We are not only requesting that our suppliers meet these requirements, we are also distributing to them a guidance manual for the management of hazardous substances in products.



• LGE Green Program certify



### LGE GP Certification Evaluation Standards

	Item	Standard
Scores	Environmental Management System	Over 80Points
	Hazardous Substances Management	(Over 42 Points for
	Material/Product Management	Mandatory items)
Validity	Follow-up Management	1 Year
Period	Renewal Reviews	2 Years
Target	All partner companies supplying products, components, raw materials and supplementary materials to LG Electronics.	

### Green Program Certification Procedure



### ● Certification Process

As part of the certification process, an inspection of the component supplier's facilities is carried out for those companies that have received preliminary approval based on the information they submitted to LG Electronics. Once final approval has been made, the companies are provided a certification. In exchange, the companies agree to guarantee that their products will continue to meet this certification.

### Green Purchasing

The RoHS Directive, which regulates the use of the six major hazardous substances (Lead, Mercury, Cadmium, Hexavalent chromium, PBBs, PBDEs) went into effect in the EU starting in July 2006. Many LG products were already in compliance with RoHS in advance of this date. Beginning in 2007, LG Electronics put into place an initiative to make all LG products RoHS compliant, even in those jurisdictions where the EU RoHS was not in effect. As a means to accomplish this, LG Electronics implemented a green purchasing strategy to help ensure that it sources components from suppliers that meet RoHS requirements.

### RoHS Compliant by Region

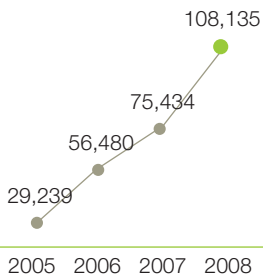


# Take-back System

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## Global Annual Take-back Amounts

Unit: ton



LG Electronics operates various take-back and recycling programs around the world that are tailored to meet the needs of each local region.

## Global Annual Take-back Amounts

Unit: ton

	2005	2006	2007	2008
Korea	28,415	30,959	37,016	32,540
Japan	824	1,257	2,250	3,570
Europe	-	24,140	38,141	71,090
North America	-	124	277	935
Total	29,239	56,480	75,434	108,135

## Highlights by Region

### ● Europe

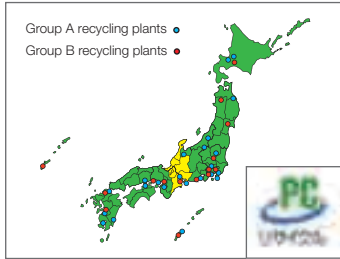
Starting in August 2005, the Waste Electronic and Electrical Equipment Directive (WEEE) imposed requirements for the disposal of e-Waste on the manufacturers of such equipment. WEEE also required that all EU member countries implement take-back systems. In addition, we provide information on our products that were sold after August 13, 2005 when local recycling companies within the EU request recycling information for those products.

### ● North America

In North America, take-back and recycling regulations have been enacted at the state rather than the federal level. For example, recycling regulations were enacted by California in 2005 and in Maine and Maryland in 2006. LG Electronics not only complies with these state regulations, but it also provides free disposal services at the request of customers for all consumer electronics products across many parts of the U.S. by jointly operating a national take-back and recycling program with Waste Management, Inc. one of the largest recycling companies in the U.S. We are also expanding our various collection events. As part of our strategy to promote the voluntary recycling of mobile phones, we started participating in "The Plug-in to E-Cycling Program" initiated by the U.S. Environmental Protection Agency (EPA) in 2007.







- **Japan**

LG Electronics, along with Japanese companies such as Panasonic and JVC, joined the LEcology Nett to actively participate in the recycling of discarded home appliances in order to comply with the Consumer Electronics Recycle Law, which took effect in 2001. In addition to this, we voluntarily set up and continue to operate a PC Recycle System.

- **Korea**

LG Electronics takes back and recycles e-Waste from customers including copper, aluminum, and plastic in Korea. In addition, LG Electronics serves as the Chair of the Korean Association of Electronics Environment in order to further carry out its responsibilities within Korea

- **Others**

LG Electronics also actively and voluntarily participates in recycling programs in Australia. LG Electronics will keep investigating various ways for global take-back system.

## Take-back & Recycling Event

- **Held the Take-back and Recycling Program for Disposed Electronic Products, Tongyeong City, Kyeongnam**

On June 9, 2008, LG Electronics participated in the "Recycle 2008" event, a two-day joint effort with citizens, the local government, and the army, to transport discarded electronics from island regions (Tongyeong City) to the mainland. The director of the Resource Circulation Office of the Ministry of Environment, the Tongyeong City Mayor, the Chairman of the Association of Electronics Association, and the Commander of the Jinhae Base Command also participated in the event. Through these efforts, we helped establish a take-back system for the island regions where it is often difficult to dispose of electronics properly.



- **Company-wide Disposed Mobile Phone Take-back Campaign**

LG Electronics is holding a company-wide mobile phone take-back campaign to collect old mobile phones as a way to increase employees' awareness of recycling and to promote environmental activities.



- **Held a Take-back Event in Dallas, Texas (U.S.)**

On December 20, 2008, we jointly held a take-back event with Starpower in Dallas, Texas, U.S.A. The event was a success with over 400 people taking part in the event.



**We will do everything possible  
to preserve our one and only earth.**



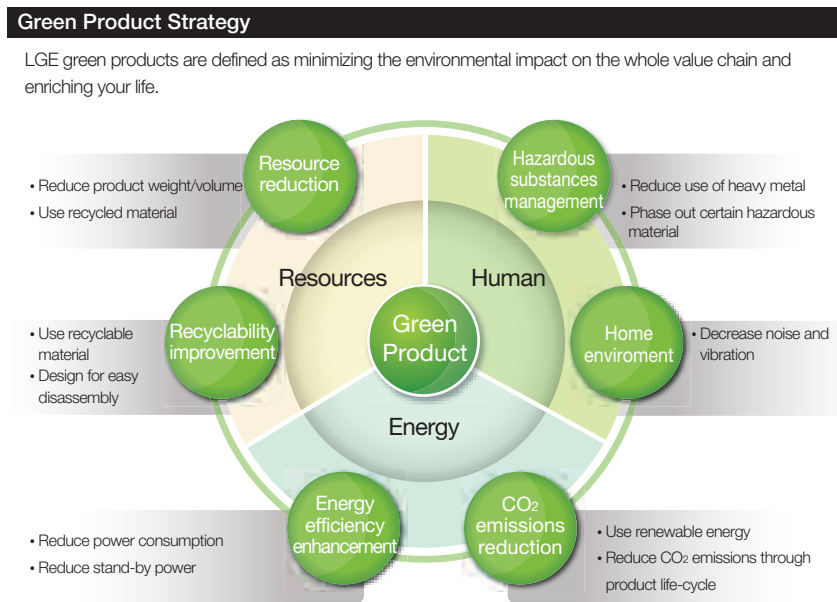
A woman and a man, both wearing white lab coats, are smiling and holding a large white sign. The sign has the text "GREEN Product Strategy" written on it in blue. The background is white with a colorful illustration at the top showing a blue sky with white clouds and a rainbow. At the bottom, there is a green grassy area with a line-art illustration of a city skyline on the left and a large round-bottom flask containing liquid on the right. The woman is wearing a white lab coat over a dark skirt and black high-heeled shoes. The man is wearing a white lab coat over dark trousers and black shoes.

**GREEN Product  
Strategy**

LG Electronics established a strategy and systematic process for manufacturing greener products.

## Green Product Strategy Direction

The objective of LG Electronics' green product strategy is to minimize the environmental impact on the whole value chain while enriching lives. The strategy consists of three components; energy, human and resources. The strategy is based on a model that takes into consideration high energy efficiency, a reduction in raw material usage, and human welfare.



### ● Energy

LG Electronics' energy strategy has been divided into two areas of emphasis: substantially enhancing product energy efficiency and reducing greenhouse gas emissions during the manufacturing process. By enhancing energy efficiency, we are working to reduce changes in the climate and provide actual economic benefits to our customers. We are trying to do our part as a global company to help protect the environment for future generations by engaging in activities that potentially reduce greenhouse gas emissions during the entire manufacturing process.

### ● Resources

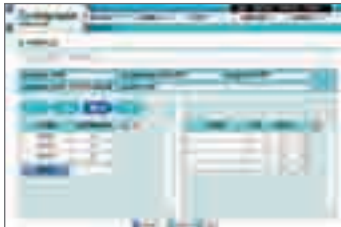
Our resource strategy involves significantly reducing our resource usage and enhancing the recyclability of the resources that we do use. This strategy is intended to reduce the amount of new resources that are used by decreasing the size and volume of the product and utilizing recycled materials when possible. We are also working to simplify the structure of the product components so that it is easier to recycle once it is discarded. This strategy is part of our efforts to establish sustainable resource usage while increasing the ease of recycling.

- Human

LG Electronics is continues to substitute hazardous substances with non-hazardous substances when possible. We have also incorporated technologies that potentially reduce allergens into some of our products

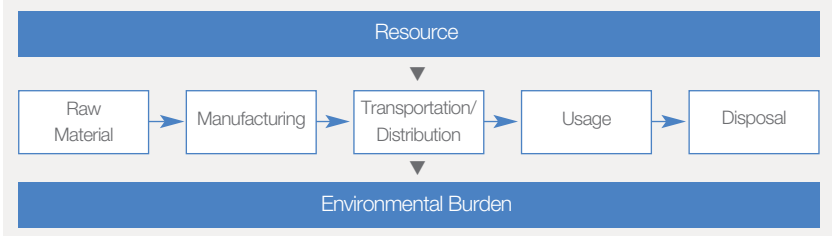
## Eco Design

Eco design aims to improve the environmental performance of products throughout the product's life cycle by considering the environmental effects of the product early in its design.



• Eco Design IT System

### Value Chain

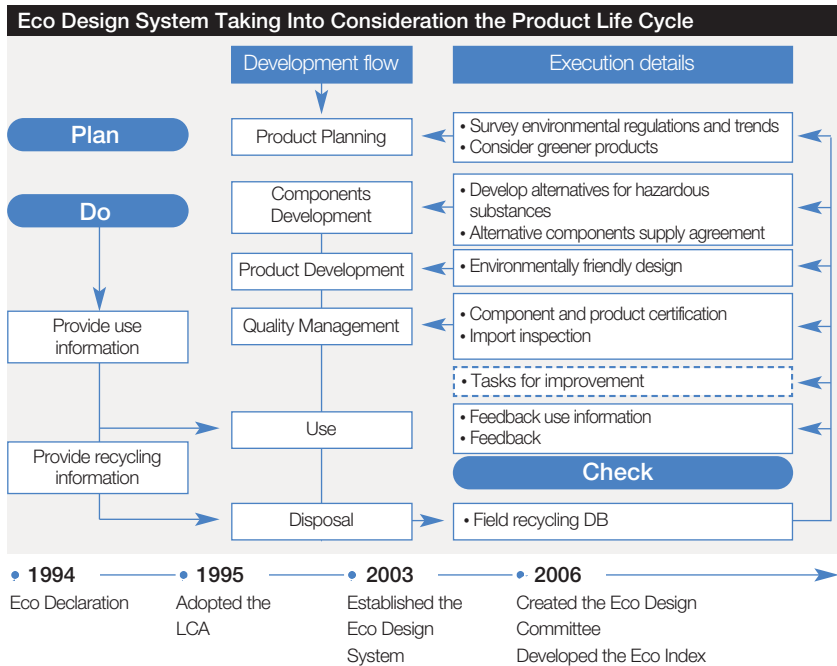


### Eco Design

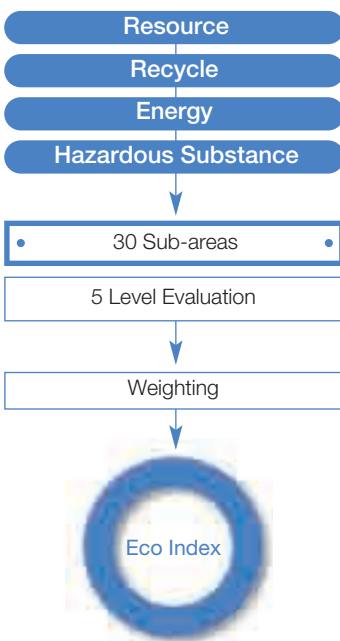
Eco design systems and energy efficiency rates are two of the requirements of the Energy Using Product Directive (EuP) in the EU. LG Electronics has always worked to enhance the energy efficiency of its products as a way to help preserve the environment and meet the needs of its customers. In addition to complying with the EuP, LG Electronics has developed its own targets and strategies in an attempt to further reduce total energy consumption and the amount of standby power used by products. LG Electronics takes into consideration the further enhancement of recyclability, reduction of resource depletion, and substitution of hazardous substances when developing its products.

● Life Cycle Assessment

LG Electronics adopted the Life Cycle Assessment (LCA) in 1995 as a way to develop more eco-friendly designs. Using the LCA, specialists assess and evaluate the environmental impact of a product beginning in the product development stage and continuing through the manufacturing stage. The LCA is intended to identify potential problems so they can be solved before progressing to the next stage of development.



**Eco Index Assessment & Index Flow Chart**



● Eco Index

LG Electronics has developed a proprietary Eco Index (divided into thirty sub-categories) that is used to quantify a product's eco design level and determine its eco performance. We intend to revise the Eco Index to take into consideration new technological developments, as they become known. The index is also used as criteria for the LGE Eco Mark Certification. For more information on the Eco Mark Certification, see page 64.

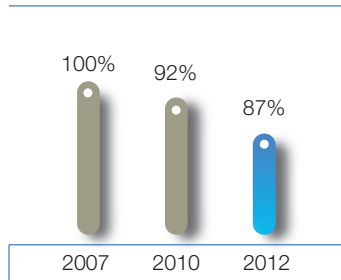
**Eco Index**

Scope	Detailed Category (Total 30)
Resource Depletion	Reduction of Weight, Volume, etc.
Recycling	Recyclable Weight, Frame Structure
Hazardous Substances	Substitution of PVC/BFR, Reduction of VOC
Energy	Standby Power, Greenhouse Gas Emissions, etc.
Other	Packaging Material, Noise, etc.

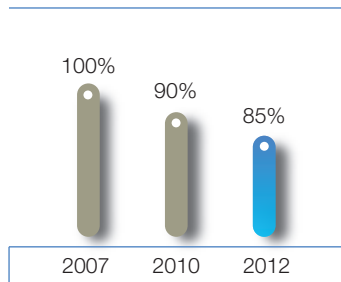
\* The allotment of points by scope may change based on the characteristics of the product group.

## Targets for Enhancing Energy Efficiency of Major Products

### TV power consumption



### Air Conditioner, Refrigerator power consumption



Global warming is partially a result of excess emissions of greenhouse gases. Global warming will likely reduce biodiversity, impact weather patterns causing regional heat waves, droughts, and floods, and raise the sea level. LG Electronics is sensitive to the impact of global warming and the excessive emission of greenhouse gases. As such, we are attempting to reduce the amount of greenhouse gases emitted as a result of the operational activities of our company. LG Electronics is also attempting to develop more energy efficient products. By reducing the amount of energy used by its products, LGE hopes that this increased energy efficiency will potentially reduce greenhouse gas emissions during the use of the product.

## Energy Efficiency Enhancement

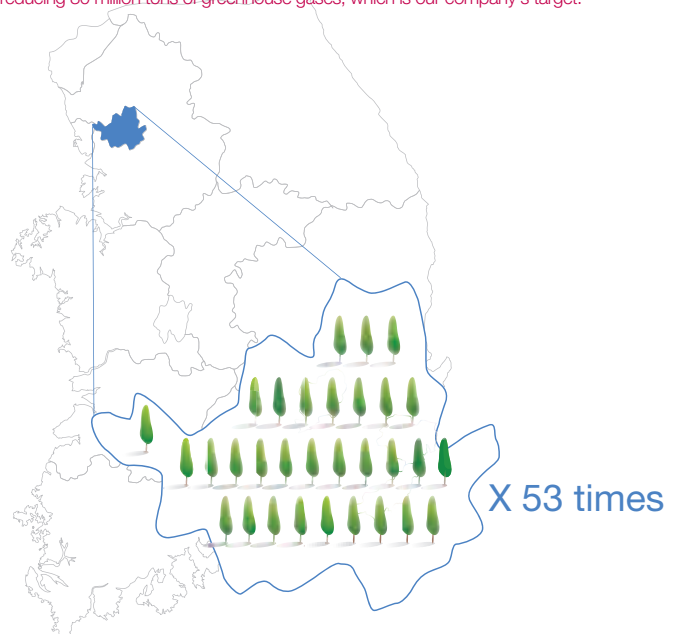
It is LG Electronics' goal to enhance the energy efficiency for all of its major products by about 15% from 2007 levels through systematic long-term investments into research and development. We have also established a target to reduce greenhouse gas emissions by 3,000,000 tons by 2020. These efforts are estimated to have the same environmental impact as planting 9.6 billion Korean white pines (one-year-old plants) in an area approximately fifty-three times the size of Seoul, or about 30% the size of Korea.

\* If 3,000 Korean white pine tree seedlings are planted in a 1 hectare area, 9.3 tons of greenhouse gases are absorbed (Source: Korea Forest Research Institute), Area of Seoul: 605 km<sup>2</sup>

### ● On-mode Energy Efficiency

LG Electronics has instituted a five-year technology road map for each of its products. We intend to achieve these energy efficient targets for each product by emphasizing energy efficiency improvements during development. By doing so, we intend to remain competitive while potentially reducing greenhouse gas emissions that result from the use of electricity.

\* The effects of planting 9.6 billion Korean white pine seedlings in an area 53 times the size of Seoul is comparable to reducing 30 million tons of greenhouse gases, which is our company's target.



### ● Standby Power

Electronic products consume power not only when they are in use, but also when they are plugged-in and not in operation. This power consumption is referred to as standby power. According to data analyzed by the Korea Energy Management Company (KEMCO), 1.7% of the total power consumed in Korea in 2006 was standby power, which was equivalent to KRW 500 billion annually. LG Electronics target is to achieve less than 0.5W standby power for most of our products after 2010.

#### Standby Power Status and Target

Unit : W

Product	2008 Standards	After 10 Years
TV	0.3~0.9	0.1~0.5
DVD	0.6~0.8	~0.5
Microwave	0.8~1.5	~1.0
Mobile Phone Charger*	~0.3	~0.25
Monitor	0.5~0.9	0.1~0.5
Notebook PC	0.7~1.0	0.4~1.0
Washing Machine	0.3~0.9	0.3~0.5
Room Air Conditioner	0.3~1.0	0.2~0.5

\* Only applicable for products made by LG Electronics.

### ● Energy/Carbon Label



LG Electronics is also working to produce higher energy efficient products in order to reduce the emission of greenhouse gases. As a part of its efforts, a substantial number of LGE products are "Energy Star" compliant in the U.S. and have received the "Energy Label" from Europe. The EU Energy Label is a rating of a product's energy efficiency levels. The "Energy Star" program is a program that was created in 1992 by the U.S. government to encourage the use and development of energy saving products.

### ● Energy Winner Award (2008)

In August 2008, our refrigerator (R-T686UHLW) received the Energy Grand Award at the "12th Energy Winners Award," which was sponsored by Consumer Korea (<http://www.cacpk.org>) and the Ministerial Award from the Ministry of Knowledge & Economy in Korea. Our air cleaner (LA-P210D) and microwave oven (MW-237PRS/ PWR) also received the Winner Award in the energy efficiency and standby power categories, respectively. These awards are given each year in recognition of energy-efficient products.



• Carbon Footprint Labeling

## Greenhouse Gas Emission Reduction

LG Electronics attempts to make efforts that will result in a reduction in the amount of energy used during a product's life cycle. This reduction in energy usage will potentially reduce greenhouse gas emissions. For more information about GHG/Energy management in manufacturing, please see pages 55 - 57.

### ● Carbon Footprint Labeling

LG Electronics participated in a trial of the Carbon Footprint Labeling program organized by the Korean Ministry of Environment. The Carbon Footprint Labeling program is designed to allow companies to more easily disclose the eco-friendly characteristics of our products. The program also requires that manufacturers disclose to customers the total amount of greenhouse gases emitted during the entire product life cycle. By participating in the program, we were able to establish standards and processes for estimating greenhouse gases emitted during the entire product cycle of our new LG Electronics Steam Direct Drive washing machine model (FR 3228WA). In February 2009, our Steam Direct Drive washing machine was the first washing machine to receive the certification in Korea.



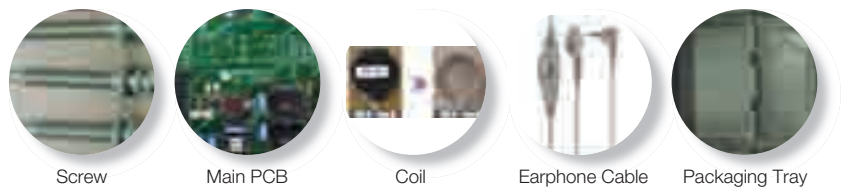
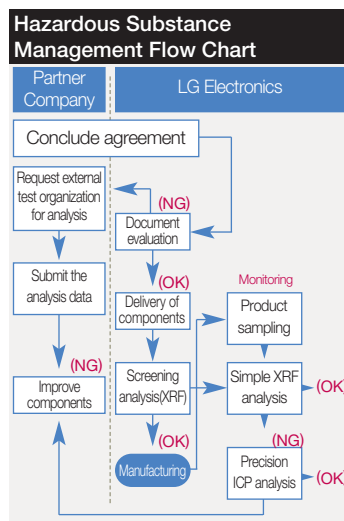
## Time Table for Hazardous Substances Phase-Out in New Products

Substance	Product	Phase Out
PVC	Mobile	2010
	TV/MNT	2012
	Home Appliance/ Air Conditioner	2014
BFR	Mobile	2010
	TV/MNT	2012
Phthalates	Mobile	2012
	TV/MNT	2012
	Home Appliance/ Air Conditioner	2014
Antimony	Mobile	2012
	TV/MNT	2012
Beryllium	Mobile	BeO-non uses
	TV/MNT	2012

LG Electronics manages hazardous substances. We have also established a company-wide chemical material management system and a timeline to phase out the use of certain hazardous substances on all our new products. To achieve this, we have formed a network with our partner companies. Simultaneously, we also operate a hazardous substance information management system (HSMS) in an effort to effectively manage the use of hazardous substances jointly with our partner companies. Our target is to maximize customer satisfaction by not only reducing noise and vibration, but also by reducing the use of substances that may potentially cause allergies.

## Hazardous Substance Management System

We are also working to reduce the use of hazardous substances by increasing our hazardous substances substitution technology, emphasizing the use of non-hazardous substances in component development when possible, and encouraging partner companies to reduce the use of hazardous substances in the supply chain. As a way to help assist in determining whether hazardous substances are included in the components delivered to our facilities, we have adopted the XRF (X-ray Fluorescence) system to screen components at all facilities. We also regularly monitor the components and products that have a high possibility of including hazardous substances.



## Examples of Hazardous Substances Substitutions

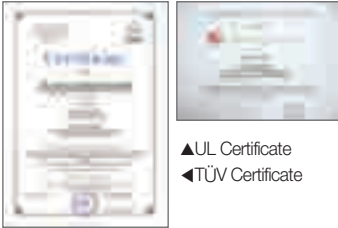
Component	Improvements
Screw	Substituted the Coating Material (Cr6+ ► Cr3+)
Main PCB	SnPb ► SnAgCu
Coil	Eliminated Deca-BDE (brominated flame retardant)
Earphone Cable	PVC ► Substituted with the TPE*
Packaging Tray	General Plastic (Nylon 66i) ► Applied the Bio-plastic (PLA, Corn Starch)

\* TPE : Thermo Plastic Elastomer

\* XRF : X-ray Fluorescence Spectrometry  
ICP : Inductively coupled plasma



• Hazardous Substance Information Management System (HSMS)



▲ UL Certificate  
◀ TÜV Certificate

### ● Hazardous Substance Information Management System (HSMS)

LG Electronics operates a hazardous substance management system that requires partner companies to disclose data on their products and components, including an analysis of the homogenous quality materials. After reviewing this information, LG Electronics determines if the suppliers meet our high standards, including EU RoHS compliance.

### ● Operate a Hazardous Substance Precision Analysis Lab (Officially certified)

LG Electronics operates a hazardous substance analysis laboratory that is equipped with precision analysis equipment such as ICP, IC, GC-MS, HPLC, and a VOC Chamber. LG Electronics' laboratory was designated an official laboratory by TÜV Rheiland (Germany) and Underwriters Laboratory (U.S.). LG Electronics has established a hazardous substance management standard and instituted laboratory methods to analyze the ever-growing number of regulated substances. We also support measures to substitute hazardous substances and monitor high risk factors related to the level of hazardous substances contained in products or their components.

### ● Measures Taken by LG Electronics to Meet RoHS Requirements

The RoHS Directive went into effect in the EU in July 2006 and regulates the usage of the six major hazardous substances (Lead, Mercury, Cadmium, Hexavalent chromium, PBBs, PBDEs). Although many LG Electronics products were already in compliance with RoHS prior to its enactment, LG Electronics began an initiative in 2007 to make all of our products RoHS compliant, even in those jurisdictions where RoHS is not in effect. LG Electronics has also helped its supply chain partners implement internal systems that work to ensure their compliance with the RoHS Directive.

### ● Measures Taken by LG Electronics to Meet REACH Requirements

LG Electronics attempts to satisfy the criteria set forth under REACH (the Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals) by monitoring the substances used in production. As an initial requirement of REACH, we investigate the substances that may be used in the final product. We also monitor the actions of our local branches and subsidiaries. If necessary, we also provide assistance to them. LG Electronics is actively taking measures to provide information on substances of very high concern (SVHCs) as well as to obtain permission and registration of their use, when necessary. By providing our partner companies with information and training courses related to REACH, we are able to manage all areas of the supply chain.

\***REACH** : REACH took effect in June 2007 as a means to protect human health and the environment. REACH is an integration of various existing EU regulations related to chemical materials. According to REACH, all substances in excess of one ton produced or imported into the EU annually, are required to be registered and evaluated according to the tonnage and hazardous level. Companies are then required to obtain permission to either import the substances or produce them within the EU.

\***RoHS** : RoHS regulates six major harmful substances (Pb, Hg, Cd, Cr6+, PBBs, and PBDEs). RoHS controls and manages the usage of these substances, as they can be harmful to humans and the environment.

## Home Environment

LG Electronics has also tried to improve the immediate surroundings of our customer's living environment by including technology on some of our products that potentially reduces allergens. We are also continuing to research ways to reduce the levels of noise and vibration of our products. LG Electronics is also researching ways to utilize bio-plastics in our manufacturing. LG Electronics is striving to produce products that provide a refreshing and pleasant experience.

- **Anti-bacterial / Anti-allergy Functions**

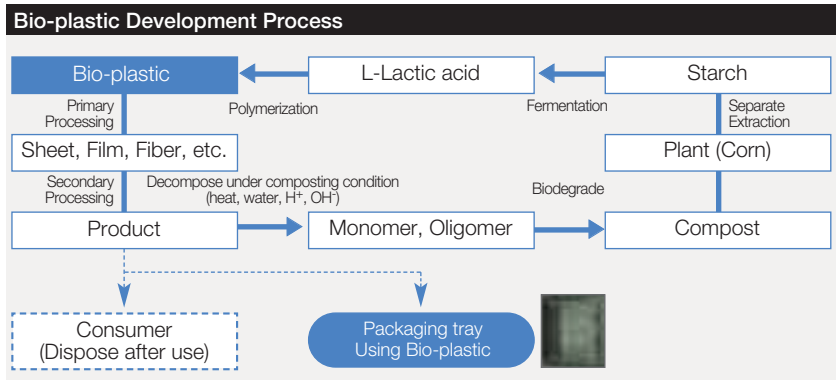
LG Electronics has obtained allergy certifications from the U.K., Germany, and Korea. We received certifications from British Allergy Foundation and the Korea Allergy & Asthma Foundation for some of our products such as washing machines. One of our vacuum cleaners also received certifications from the British Allergy Foundation and Germany's SLG for reducing environmental allergens and minute dusts. The British Allergy Foundation and Korea's FITI Testing & Research Institute also acknowledged our air cleaner for its inclusion of technology that reduces allergens.



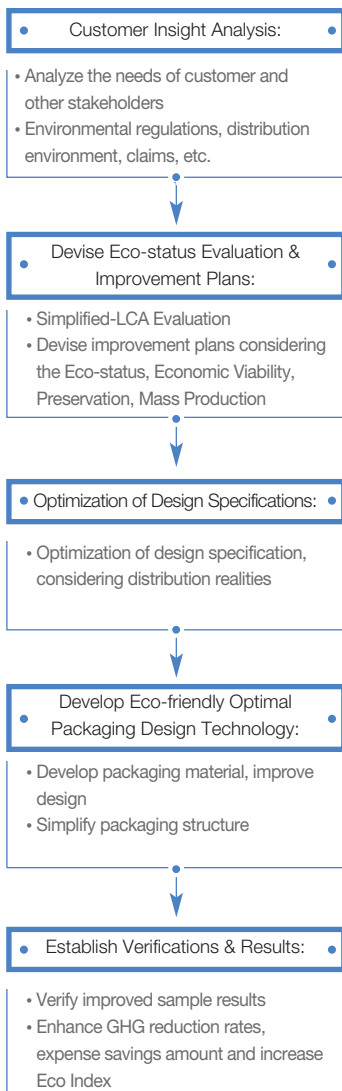
Certification	Certified Product
BAF (British Allergy Foundation)	Vacuum Cleaner, Air Cleaner, Washing Machine
SF Mark (FITI Science Research Center)	Air Cleaner
SLG 5 Star (SLG Pruf-und zertifizierungs GmbH)	Vacuum Cleaner
KAF (Korea Allergy & Asthma Foundation)	Washing Machine

- **Development of the Bio-plastic**

LG Electronics is conducting research to incorporate bio-plastic in our products and packaging materials. The use of bio-plastic may lead to a reduction of waste in global landfills because bio-plastic uses comstarch and other natural substances that are biodegradable.



## Packaging Improvement Process



LG Electronics has attempted to improve our product packaging by utilizing more eco-friendly packaging material. In the development stage, we also consider the ease of dismantling and recycling our products. To achieve this, we have implemented three design strategies and an evaluation checklist to aid in development.


## Reduction of Resource Utilization

### Reduction of Resource Utilization through Improvement in Packaging

The demand for more eco-friendly packaging is steadily on the rise. We are developing more eco-friendly packaging material, improving the packaging design, and slimming down the packaging structure's size by analyzing the packaging strength. As a result of our efforts, we have been able to potentially reduce energy consumed during production, transportation, and distribution of our products. In 2008, new package designs were put into place for a number of our mobile phones, washing machines, and refrigerators.


### Example of Packaging Improvements: Washing Machine Packaging R&D

**Packing Absorption Structure Improvement**



We conducted research and development to reduce the quantity of materials used in the packaging and the total weight of the products. The result of the research was a redesign of the box arrangement and an improvement in the packing absorption structure on the bottom of the box. These changes resulted in a decreased weight. By reducing the weight, there is a potential reduction of greenhouse gas emissions during transport.

**Redesign of Box Arrangement**



## Enhancing Recyclability



- **Product Design, Taking into Consideration the Ease of Recycling**

We try to evaluate products to ensure that they are designed and developed to be easily disassembled and recycled. LG Electronics has implemented a systematic process of evaluating its products by using the Recyclability Evaluation Check List, the Recyclable Rate Evaluation Check List, and the Recycling Design Guide.

- **3 Major Recycling Design Strategies**

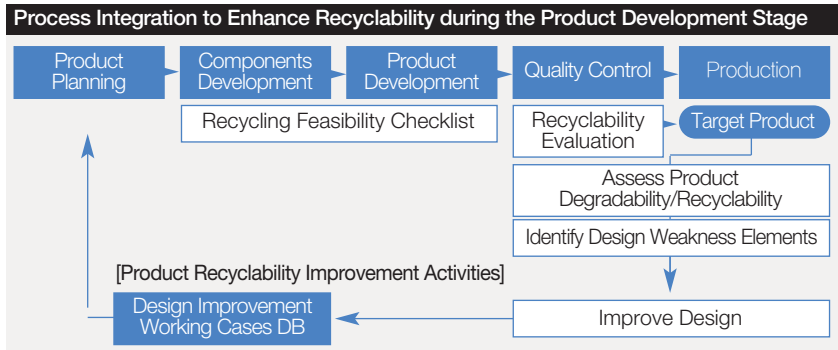
Product developers utilize various tools based on three major design strategies to improve the recyclability of products and obtain ideas for further improvement.

### 3 Major Design Strategies for the Improvement of Product Recyclability

Designing components that are easily identifiable and accessible

Designing components that are easily dismantled

Designing components using materials that are recyclable



### Example of Improved Recycling Rates



Recycling Rate of Phone 42% (EMI Shield)

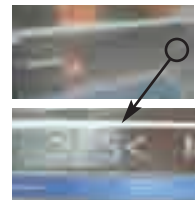


Recycling Rate of Phone 69% (EMI Shield)

LG Electronics has attempted to limit electromagnetic waves originating from mobile phones by changing our existing "coating method" to a "Shield Can" method that uses metal sheets. By changing our method, we were not only able to reduce costs, but we were able to resolve potential recycling difficulties. The exterior plastic can now be recycled because it is possible to separate the plastic from the stainless steel coating. This results in enhanced recyclability of our mobile phones.

### Example of Disclosing the Plastic Material Utilized

We disclose the plastic material (Weight: 25g and over / Size of Flat Area: 200mm<sup>2</sup> and over) used in our product in accordance with ISO KSM 11469. By disclosing the specifications of the plastic used, recycling becomes easier and more accurate.



Tray drawer

# LG ELECTRONICS ENERGY SAVING PRODUCTS

*When using LG Electronics' products that provide energy savings, the reduction in greenhouse gas could potentially have effects similar to the planting of trees.*

**7 Trees**



LCD TV, 47LG90QD  
(Compared with 2006 47LB2DNE)



**10 Trees**

SolarDOM lightwave oven\_MP929NQS.AKOR  
(Compared with Electronic oven\_E-M770S)



**2 Trees**

Home Theater, HT953TV  
(Compared with HT762TZY)



## ● Tree Conversion Standard

1. Compared energy consumption between models (Based on LG Electronics' lab test)
2. Converted the amount of energy saving into greenhouse gas (Based on World Resource Institute 2007, 0.573kgCO<sub>2e</sub>/kWh)
3. Converted the amount of greenhouse gas into the number of trees (Based on EPA tree planting effect, 3.86kgCO<sub>2</sub>/1 coniferous tree)



**2,042 Trees**

Air Conditioner, ARUB100TL2  
(Compared with ARUB1008TI)



**39 Trees**

Refrigerator, R-T686UHLW  
(Compared with 2007 RT691GH)



**7 Trees**

Washing Machine, FR3228WA  
(FR3228WA when using steam)



**8 Trees**

Notebook, XNOTE S210  
(Compared with 2007 XNOTE Z1)



**5 Trees**

LCD Monitor, W2252TE  
(Compared with 2006 L226WU)

# Mobile Phone

LG Electronics tries to make not only mobile phones with green features, but also phone accessories.

Since being the first in the world to introduce the CDMA mobile phone in 1996, LG Electronics has continuously offered high-tech mobile communications technology. This has enabled LG Electronics to establish itself as a leading mobile device provider in the mobile industry. Equipped with refined designs and superior technology, our mobile phones have caught the attention of the world by creating new trends through careful research into customer needs. These trends include not only cutting-edge technology but eco-friendly features as well. Such eco-friendly features include reducing the amount of environmentally unfriendly substances in the products, limiting the use of the Earth's resources by developing super lightweight products, increasing the use of recyclable materials, and developing battery chargers that consume less standby power to help reduce energy use. In order to allow consumers to easily recycle their old mobile phones, we established 392 recycle drop sites in forty-five countries. New eco-friendly technologies that are either currently being applied to mobile phones or are being developed are listed below.



**1996**  
First in the World to Introduce CDMA Mobile Phones  
[LDP-200]

**2004**  
First in Korea to Receive the Mobile Phone Environmental Performance Labeling Certificate

**2006**  
All Products Shipped Satisfied RoHS (beginning in July 2006),  
First in Korea to Receive RoHS Certifications (TÜV) for a Mobile Phone  
[Chocolate(KG800)]

**2007**  
Voluntarily Completed Establishment of Take-back Systems in 45 Countries World-wide  
[Shine(KE970)]

**2009**  
Introduced a Greener Mobile Phone at the Mobile World Congress  
[Watch phone(GD910)]

[LG-SD230]

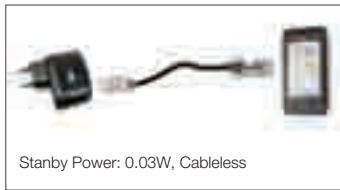


● **Reducing Hazardous Substances**

Since July 2006, all of our mobile phones and accessories marketed around the world have met the EU RoHS requirements. We are also trying to reduce the use of halogens (i.e., bromine, chlorine), PVCs, BFRs, and CFRs, all of which are believed to negatively impact humans. We plan to steadily expand these efforts to other components. Additionally, we have established a schedule for eliminating the use of phthalates, which are mainly used in outer layers of electrical cables as a plasticizer, and antimony, which is a nonflammable material. We are currently developing substitutes for these substances.

**Anticipated Phase-Out Schedule for Certain Hazardous Substances other than the 6 Major RoHS Substances**

Hazardous Substance		New Models (Year)	All Models (Year)
Halogen	PVC	2010~	2012~
(Bromine, Chlorine)	BFR, CFR		
Phthalate		2012~	TBD
Antimony			
Oxidized Beryllium		-	2002~



Standby Power: 0.03W, Cableless

• Low Power Charger

● **Saving Energy**

To reduce the energy consumption of mobile phones, we are continuously developing chargers that have less standby power consumption. We intend to reduce the standby power consumption from 0.3W to 0.25W, and finally to 0.15W. We have also introduced a mobile phone with a charger reminder function to help reduce unnecessary energy consumption. The charger has an audible alert that informs the customer when the mobile phone is fully charged so that the customer can disconnect the mobile phone from the charger. LG Electronics is also developing a charger that uses the world's lowest standby power of 0.03W. This new charger will use a data cable as opposed to the standard charger cable.

● **Manual & Box**

We have found substitutes for paper and oil ink, items that are used in manuals and product packaging. Paper was replaced with recycled paper and the oil ink was replaced with soy ink. By using recycled paper, we were able to save resources and reduce energy use, thereby potentially reducing greenhouse gas emissions. In addition to changes in the composition of the packaging material, we made significant changes to the package structure, helping to enhance transportation efficiency.



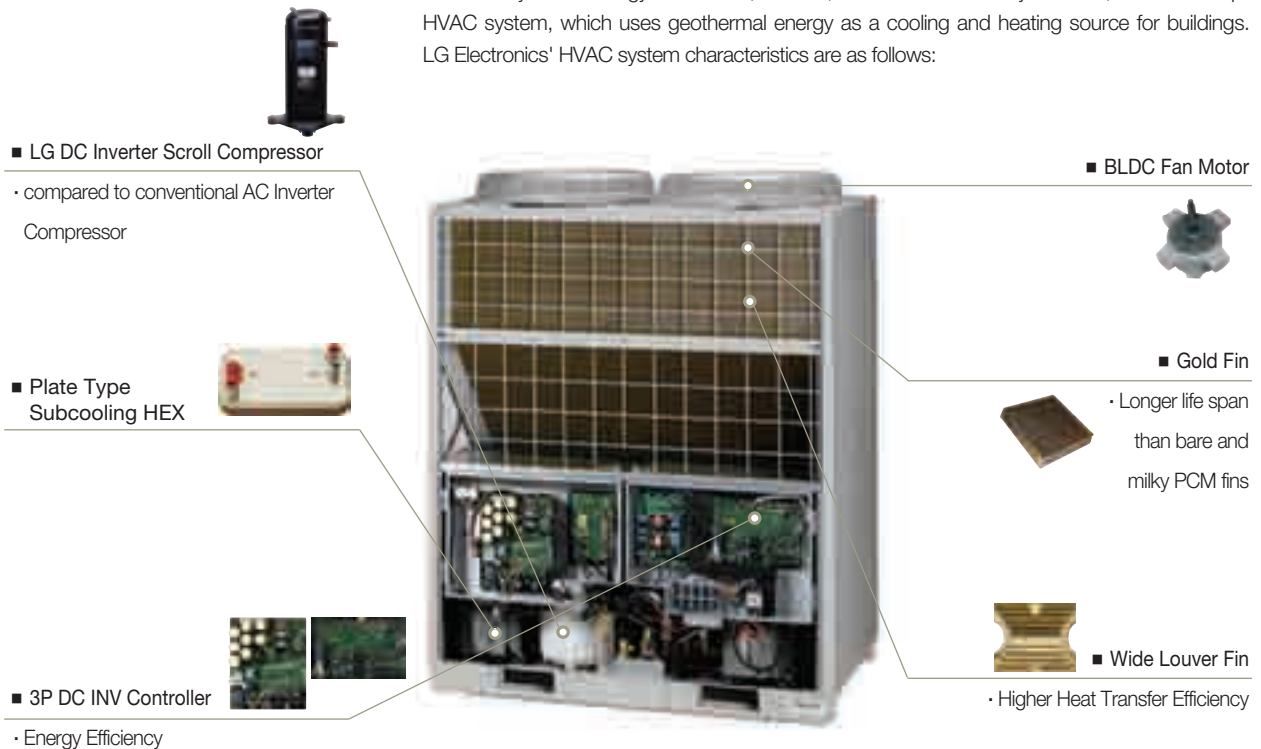
• Manual & Box (LX260, KV990)

# Air Conditioner

LG Electronics' air conditioner has green features that maximizes energy efficiencies and provides a refreshing living environment

Our designs and competitive core technologies have helped us capture the number one position in terms of sales for nine consecutive years. Indeed, since we first manufactured window air conditioners in 1968, we have achieved accumulated sales of 100 million units as of 2008. This is similar to having a customer select approximately 4.8 units of our air conditioners every minute for forty years. These sales attest to LG Electronics' true global leadership. Our air conditioners are not just simple air conditioners, but represent the "Life Conditioner" concept. Based on this concept, our air conditioners provide not only cooling functions, but also heat, air purification, and dehumidification. By automatically adjusting the indoor temperature, our air conditioners ultimately reduce power consumption.

As a system air conditioner, the Multi V, a next generation HVAC system, can have a diverse number and type of indoor units hooked up to a high performance exterior unit depending on the type and characteristics of the building. The Multi V collects the discarded heat from an indoor unit and reutilizes it as cooling / heating energy, making it a greener product that substantially saves energy. In addition, in 2007, we introduced the Hybrid XEO, a new concept HVAC system, which uses geothermal energy as a cooling and heating source for buildings. LG Electronics' HVAC system characteristics are as follows:



**1968** First in Korea to manufacture window air conditioners (GA-111)

**1979** First in Korea to manufacture separable-type air conditioners (GA-100SP)

**1998** First in Korea to manufacture system air conditioners

**2007** Introduced the new concept thermal energy solution, Hybrid XEO  
National Environmental Management Presidential Grand Prize (Korea)

**2008** Achieved an accumulated 100 million unit sales  
Number 1 in sales, globally, for 9 consecutive years  
Energy Winner Awards



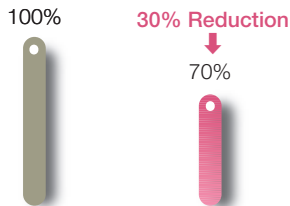
• 2008 Energy Winner Award



• MULTI V SYNC

### Power Consumption

Unit : %



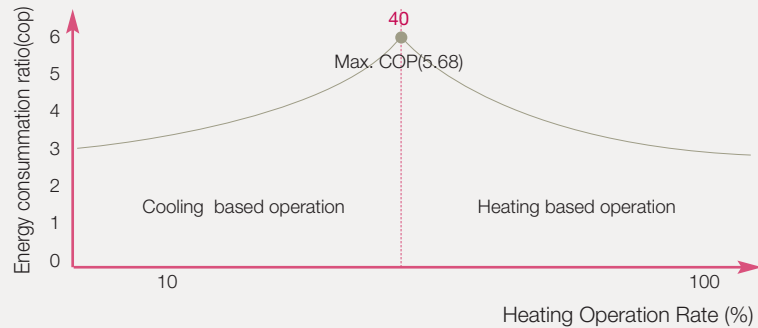
Existing System (5HPx2EA)      MULTI V.SYNC (10HP)

### Enhanced Energy Efficiencies

LG Electronics received the 2008 "Energy Winner Award" from the Korean government for its high energy efficiency. At the same time, LG Electronics received an official certificate from the Korean Government as the top leader in the environmental sector for its renewable energy and high efficiency appliances.

### Heating & Cooling Synchronous operation

High COP up to 5.68 - When, Cooling(40%)+Heating(60%)



\* Outdoor temperature 7°C DB / 6°C WB

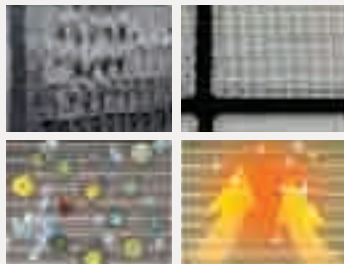
\* Indoor temperature 20°C DB / 15°C WB

### Refrigerants

LG Electronics was one of the first companies in Korea to use a refrigerant, HFC-410A. Our air conditioner division is converting the use of HCFC-22 to HFC-410A refrigerant in all of our models. In addition, we continue to concentrate our efforts on developing natural refrigerants.

### Robot Cleaning

The robot cleaning function cleans the air conditioner when needed while the automatic brush cleans the filter, helping keep the interior clean. This cleaning function ultimately enhances the powerful cooling capabilities of the air conditioner.



[Existing Air Conditioners]      [Automatic Disinfection Heat Drying]

# Washing Machine

LG Electronics' Steam Direct Drive washing machine has green features that efficiently utilize resources and reduce energy consumption.

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• Korea LOHAS Certification

These features include a reduction in the amount of hazardous heavy metals that are used and an increased resource utilization that is achieved through the reduction in product size and weight. In addition, LG Electronics Steam washing machine received Korean LOHAS Certification for its high energy efficiency, water saving features, increased recyclability. In addition, all front loading washing machine models received the RoHS certification from the European certification institution, TÜV.

### ■ RoHS Compliant

• Pb, Cd, Hg, Cr+6, PBB, PBDE

### ■ RoHS Certification

• Front loading washing machine, TÜV(Germany)

### ■ High Energy Efficiency

• DD Motor, Steam

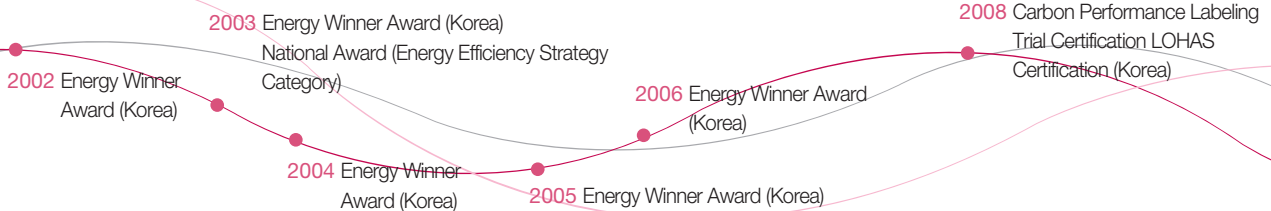


### ■ Allergy Care

• Allergy care certificate:  
BAF(U.K.), KAF(Korea), ITEA(Japan), AAFA(U.S.)

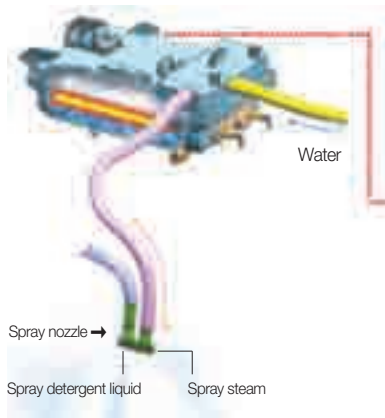
### ■ Confronting Climate Change

• Carbon Footprint Labeling /  
Korea LOHAS Certification



● **Enhancing Energy Efficiencies**

Most LG Electronics' front-loading washing machines use a DD (Direct Drive) motor, which can be more energy efficient than traditional motors.



**Front Loading Washing Machine's Steam**

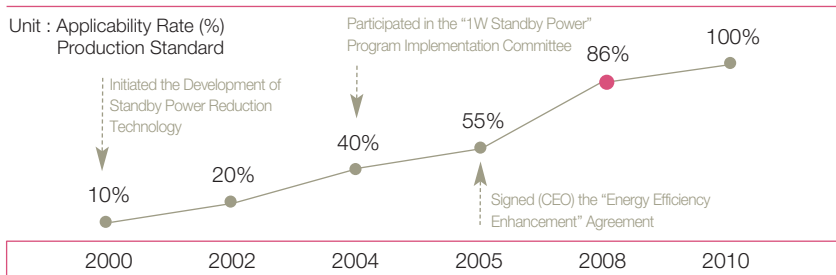
By continuously heating a separate water storage tank through a direct heating method, pure steam is powerfully sprayed.



Continuous spray system

- Steam Temperature 98°C
- No additional water heating heater is necessary
- Steam is sprayed for approximately 40 minutes by a steam spraying nozzle

**Front Loading Washing Machine Standby Power Status**



● Fully Automatic —● Drum —————>

● **Reduction of Hazardous Substances**

LG Electronics washing machines use PCBs, screws, cabinet cases and power cables, which meet the EU's RoHS Directive. In addition, the main body cabinet was reduced in weight and size, making it easier to recycle.



- BAF(British Allergy Foundation)(Left)
- KAF(Korea Allergy Foundation)(Right)

| Allergy Care | Allergy-causing substances, such as pet dander, can irritate asthma symptoms and other allergy-related diseases. These substances, which may be located on blankets and other household accessories, cannot be detected by the eye. LG Electronics' Allergy Care, which can reduce these allergy-causing substances, received certifications from allergy associations in the U.K., U.S., and Korea.



• Front Loading Washing Machine' Standby Power Status



▲Front Loading Washing Machine Detergent Tray    ▲General Detergent Tray

| Wash Rinse Optimizer | LG Electronics' washing machines control the washing time based on the status of the laundry, while a sensor senses the concentration level of detergents and adjusts the frequency of the rinse, resulting in a clean wash.

# Refrigerator

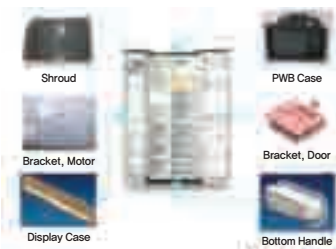
42

Among the electronic appliances used in everyday life, the refrigerator usually consumes the most electricity. As the refrigerator is in operation 24 hours a day, assessing and monitoring electricity consumption is possible. As a result, the refrigerator has been approved as a carbon business (CDM: Clean Development Mechanism) target item by the UN. LG Electronics' refrigerators are integrated products utilizing sophisticated technological expertise from various fields, including appliances, electronics, food engineering, and design.

After LG Electronics manufactured Korea's first household refrigerator in 1965, it introduced the world's first LCD TV refrigerator. LG Electronics has established itself as a true leader in the global refrigerator market.

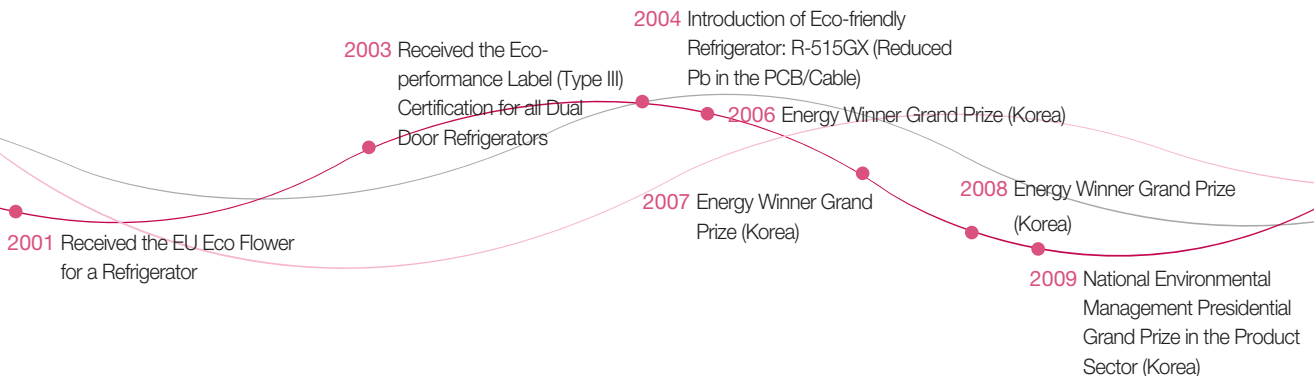
## ■ Recycled Plastics

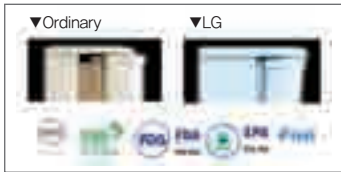
- Shroud
- Bracket, Motor
- Display Case
- PWB Case
- Bracket, Door
- Bottom Handle



## ■ High Energy Efficiency Technology

- Linear Compressor
- Save Cooling System
- VIP (Vacuum Insulating Panel)





• The application of Anti-bacterial agent on Bioshield-gasket

● **High Energy Efficiency and Low Noise**

The LG Electronics refrigerator has a green feature that helps reduce power consumption and noise levels compared to existing LG products. LG Electronics achieved these results by i) applying LG proprietary “Linear Technology,” a high efficiency cooling system that connects the cold storage and freeze storage compressors through a linear method, ii) using energy efficient LED technology, and iii) utilizing a highly efficient vacuum insulation technology. These efforts enabled LG Electronics to receive the “Energy Winner” Grand Prize for three consecutive years from 2006 to 2008.



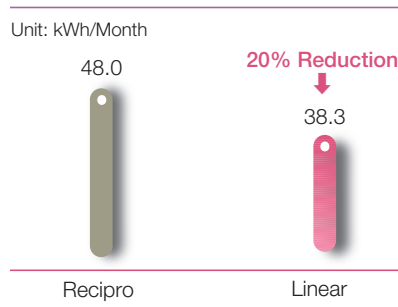
- Energy Winner Grand Award for 3 Consecutive Years
- Energy Grand Prize & Ministry of Knowledge & Economy Minister Award: LG Electronics' Linear Dios Refrigerator
- Energy Grand Prize & Ministry of Environment's Ministers Award for applying Solar Cell non-electrode Street Lamps

North America	<b>Consumer Reports</b>	1place (2005,2008)
U.K.	<b>Which</b>	1place (2007)
France	<b>QUE</b>	1place (2008)
Australia	<b>CHOICE</b>	1place (2008)

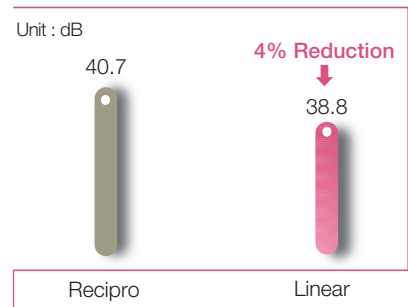
● **Material**

LG Electronics is committed to voluntarily employing more eco-friendly materials in its refrigerators. We established a mid- to long-term plan to improve materials that may contain hazardous substances. At the same time, we started using refrigerant, R600a and cyclopentanone.

**Power Consumption**  
(Tested on GW-P227Y)



**Noise**  
(PWL (Tested on GW-P227Y))



# Vacuum Cleaner

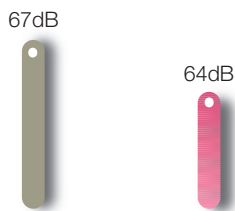
44



• Example of Optimizing Components

## Improved Noise Level of Vacuum Cleaners

Unit : dB



Existing Model VK8800SHAFY



[Muffler Chamber]

[Delta Air Flow]

- 2008 Trial Operations for a Korean-type Integrated Product Policy (IPP) (2008 ~ 2009) (Korea)
- SLG 5 Star Certification (Germany)
- BAF Certification (U.K)

The LG steam vacuum cleaner sucks in dust and steam cleans simultaneously. Its motorized dust compressor technology helps prevent dust from spreading, ultimately providing convenience to customers.

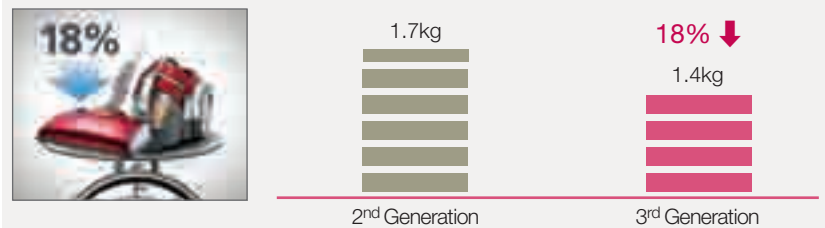
- **Energy Efficiency**

Compared to previous models, the LG steam vacuum cleaner (VK8800SHAFY) reduced preheating time for steam function to 2 minutes 30 seconds from 4 minutes 30 seconds, a 44.4% reduction that constitutes a significant drop in energy consumption for preheating time for steam function.

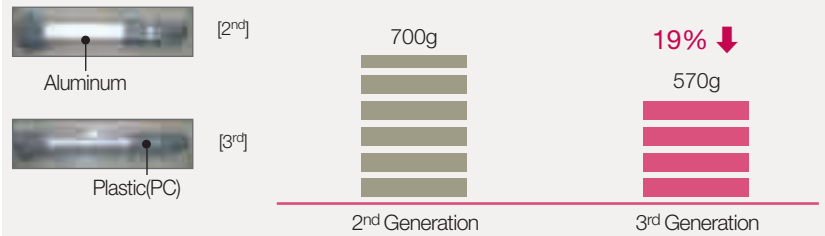
- **Reduction of Resources**

By substituting materials used in the pipe to reduce the pipe weight, we decreased the use of resources and increased user convenience. Weight reduction was also accomplished through component optimization.

### Examples of Reducing the Weight of the Entire Suction Pipe through Component Optimization



### Examples of Improving the Weight of the Pipe through Substitution of Materials Used



- **Noise**

We continuously focus our research and development efforts on ways to reduce the noise level and provide a pleasant cleaning experience for our customers. Through structural changes, we were able to reduce the noise level from 67dB to 63dB, compared to the previous model. (V-KS830MJA)

### | HEPA Filters |

LG Electronics is striving to provide customers with products that promote a cleaner living environment. By utilizing 3-step HEPA filters, we developed a product that can compress dust and provide washable functions, which make it easier for consumers to empty their filters.





# Air Cleaner

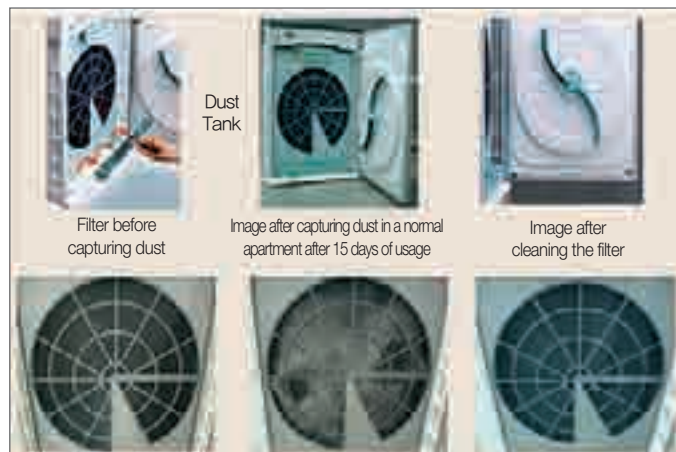
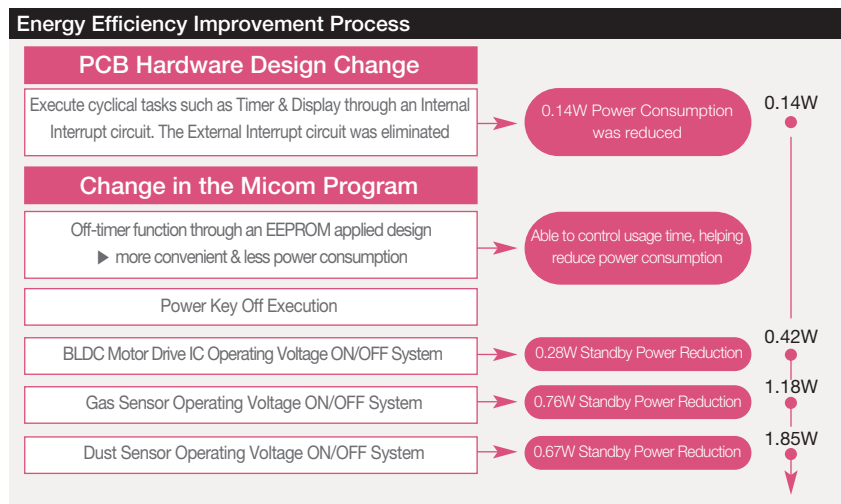
The Air Cleaner (LA-P210DG) is a greener product that received the Energy Winners Award in 2008 in the energy efficiency sector.



• Air Cleaner LA-P210DG

## • Energy Efficiency

By minimizing the standby power consumption to below 1W, we can reduce maintenance costs and greenhouse gas emissions. For example, by changing the product's circuits and program, we were able to reduce the standby power when compared to previous LG products. Further, by developing the automatic filter cleaning system, we were able to further reduce power consumption.



• Automatic Cleaning System

## • Home Environment

The washable filter and automatic filter cleaning functions offer economic benefits because there is no need to change filters. An all-purpose free filter and allergen specialized filter were also adopted.

| Noise | A high efficient fan and low noise piping system were developed. In addition, any abnormal noise in the piping system was reduced.

- Green Mark 
- CA (Korea Air Cleaning Association) Certified 
- BAF (British Allergy Foundation) Certified 
- FITI Disinfection SF Certified 

# Cooking Appliance

LG Electronics' cooking appliances enable the consumer to reduce energy consumption. Our cooking appliances also have green features that take into consideration energy efficiency when in on-mode and off-mode.

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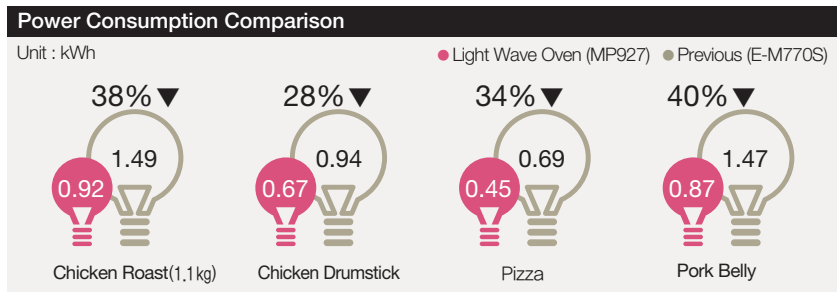


• DIOS Light Wave Oven (MP928NRC)

LG Electronics' cooking appliances enable the consumer to reduce energy consumption. Our cooking appliances also have green features that take into consideration energy efficiency when in on-mode and off-mode.

### ● Enhancing Energy Efficiencies

By adopting an efficient heating method and system, LG Electronics' light wave oven (MP927) consumes less energy compared to a conventional electric oven. (E-M770S) When not in-use, after 5 minutes, the internal lights automatically turn-off, helping to save electricity.



### ● Eco RED Coating

When cooking in existing products, the heat causes the RED outside coating to change. To overcome this, without using Cadmium (Cd), we developed an ink that produces a Red Wine color that can withstand high temperatures.



[Acryl type resin]



[Silicon Epoxy type resin]

# Monitor

LG Electronics' LCD Monitors have green features that can reduce both overall power consumption and standby power consumption.



• W2252TE

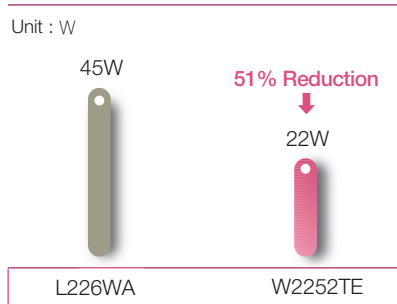
- **Best Power Saving Monitor**

LG Electronics' monitor (W2252TE) is one of the most energy efficient LCD monitors. By decreasing the number of lamps by half through increased prism efficiency and improved circuitry designs, standby and overall power consumption dropped compared to existing monitors.

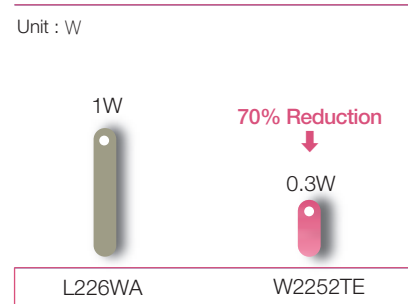
- **Received Eco mark Certifications**

Our product received the Eco Mark (Korea) and meets Energy Star compliance requirements in the U.S.

### On-mode



### Standby mode



1999 First in the world to Receive the EU Eco Flower

2000 First in Korea to Receive the Eco mark in the Monitor Category (Korea)

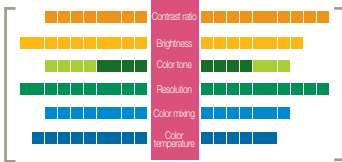
2007 Received the EPEAT Certification (U.S.), Silver Class (13 Models)

LG Electronics' TV has a green feature that attempts to maximize energy savings through Smart Energy Saving Technologies.

**Intelligent Sensor**



Attached a 3D light sensor that senses the brightness and color.  
By analyzing the brightness and color tones of the external environment, the sensor automatically adjusts the picture.



By creating an optimal picture quality based on the brightness and color, the eye is protected, while power consumption is substantially reduced.  
4096 step minute adjustments through the high quality multi-light sensor.

● **Enhancing Energy Efficiency**

LG Electronics continues to make every effort to reduce power consumption in its TV products. Through continuous development and incorporation of power saving panels and technology to optimize the lighting source and circuitry, unnecessary loss of power is minimized. For example, the intelligent sensor automatically controls the screen's brightness through a micro sensor that detects the changes in the surrounding lighting environment, which can help save energy and money.

● **Reduction of Resources and Improvement in Recyclability**

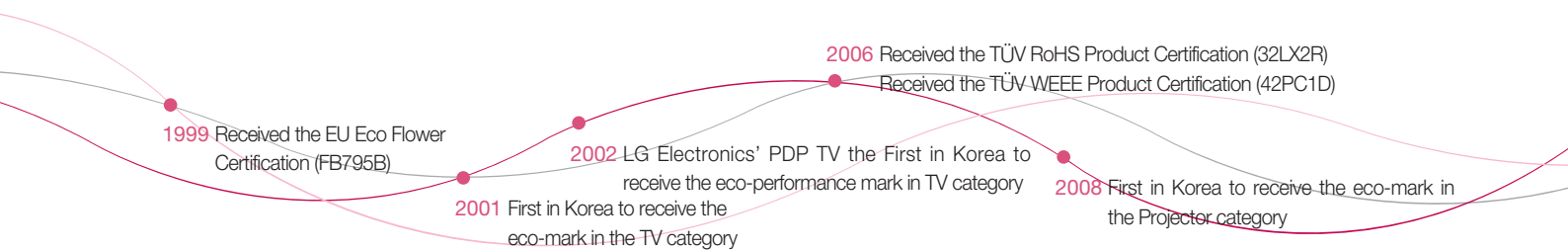
From the perspective of utilizing resources, improvement efforts continue to be carried out on various parts of the product. By improving the framework structure of our products and modifying the speaker system, we decreased the weight and volume of the TV. Further, we standardized components such as screws and adopted a frame assembly frequency reduction design that decreases the number of frame assembly holes. This reduction in holes helps to reduce resources and makes it easier to disassemble discarded products. We also optimized the packaging and decreased the box size, helping reduce packaging material.

**Light Weight Product Design**



● **Hazardous Substance Reduction and More Eco-friendly Material**

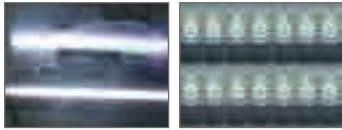
LG Electronics strives to go beyond the EU RoHS and other applicable environmental regulations. For example, LG Electronics is committed to reducing heavy metals and bromine-type nonflammable materials, which are not addressed in the EU RoHS. We are actively considering the use of natural materials and more eco-friendly materials that help reduce the use of resources and decrease greenhouse gas emissions. As such, in 2007, we introduced a TV cabinet made of wood, a natural material. We will continue our research to be able to apply more eco-friendly material, such as bio-plastic, to our products.



## LCD TV

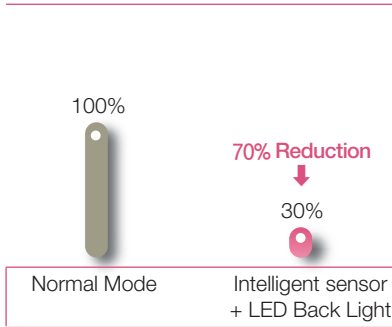
- **Mercury Substitution and Energy Reduction**

For our LED LCD TVs, we substituted the CCFL backlight with the Aurora LED which is better in energy efficiency. By redesigning the product frame structure, we were able to reduce the weight of the product. The product packaging size was optimized, creating a reduction in packaging volume.

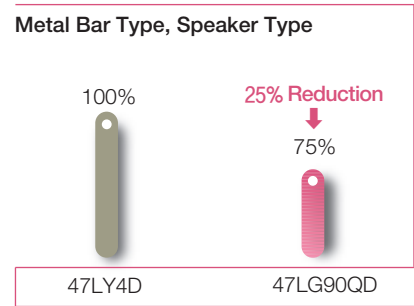


[CCFL(Existing)] ▶ [LED]

### Power Consumption Comparisons (Tested on 47LG90QD)



### Product Weight Reduction



## Plasma TV

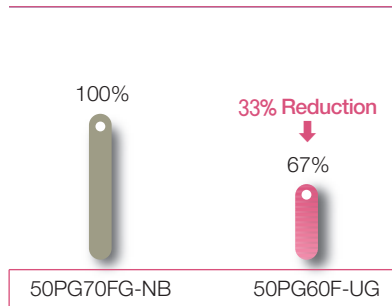
- **Reduction in Energy Consumption**

Through the development of a low dielectric substance and high efficiency drive circuit, we were able to create a lower power consumption, optimal lighting TV.

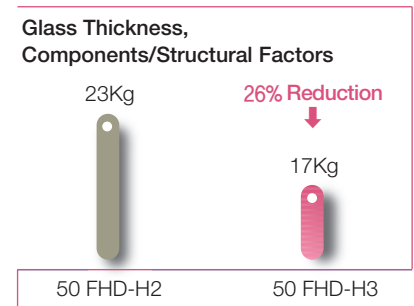
- **Reduction in Resources and Improvement in Recyclability**

Compared to existing LG products, we were able to reduce the product weight by reducing the thickness of the glass and decreasing the number of components. By reducing the frame structure through redesigning the existing framework structure, we were able to reduce resources and enhance product recyclability.

### Energy Consumption Reduction



### Product Weight Reduction



Through the development of renewable energy technologies, LG Electronics is striving to minimize greenhouse gas emissions from its facilities and products. Renewable energy is energy generated from natural resources - such as sunlight, wind, rain, tides, and geothermal heat - which are naturally replenished (i.e., "renewable").

- **Solar Cell**

Starting in 2005, the LG Group started the solar cell business as a new growth engine. The new business is being carried out by vertically affiliated companies including LG Electronics, LG Chemical, LG Solar Energy, LG Siltron, and LG CNS. LG Electronics is playing a pivotal role in the production of cells and modules, continuously carrying out research and development on solar cell as a next generation growth engine. For example, in 2008, we decided to construct solar cell production lines in Kumi, North Kyongsan Province and to invest KRW 220 billion by 2010.

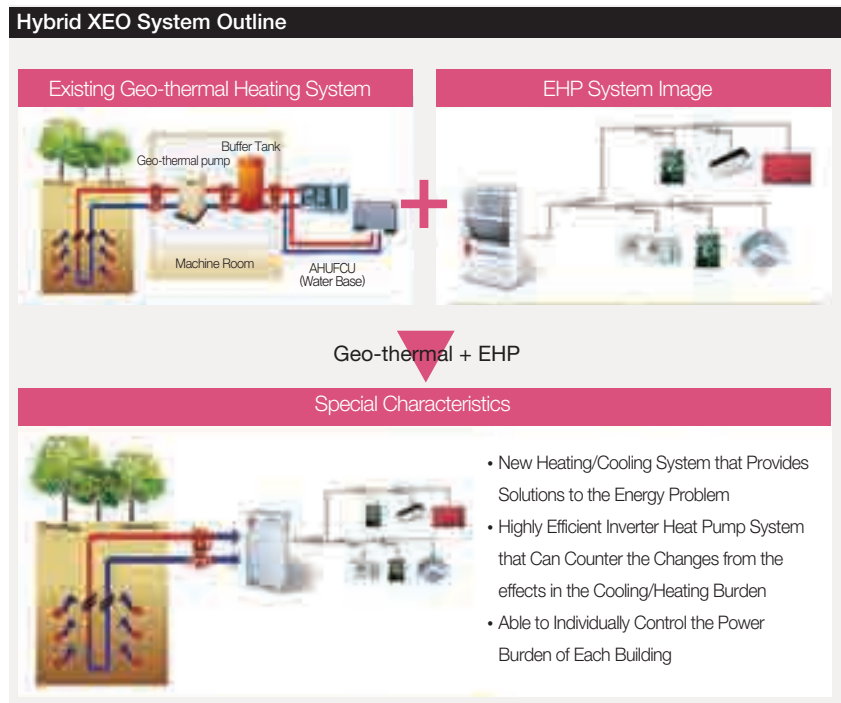
- **LED Business**

As greater emphasis is placed on product energy efficiency, LEDs (Light Emitted Diode) are gaining substantial attention in the lighting and display areas. LEDs are used in diverse areas such as TVs, mobile phones, and lighting. We expect that LEDs will be used in broader areas and more products in the future. With the development of the LCD with Full LED backlighting, LG Electronics is aggressively pursuing the LED business. Beyond this "LED TV", we intend to provide better value to customers by incorporating LED technology into various products, such as mobile phones, home appliances, aesthetic lighting, etc.



● Hybrid XEO : Cooling/Heating System Utilizing Geo-thermal Energy

LG Electronics developed a new concept cooling/heating system called the Hybrid XEO that utilizes geo-thermal energy. The Hybrid XEO adopted an Air-to-Water heat pump technology and improves performance by using DC inverter compressors.





# GREEN Manufacturing

Life's Good

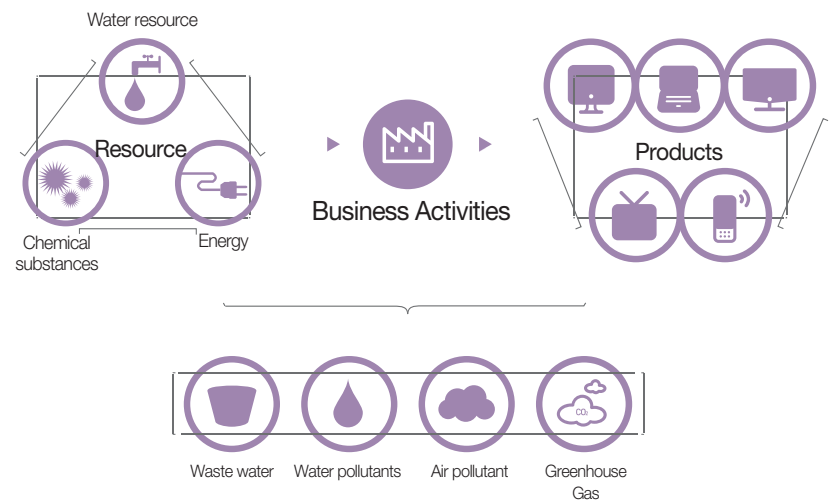






**We hope to fill our lives with green nature that provides harmony between our living environment and nature itself.**





LG Electronics strives to minimize the resources used in its business operations, while attempting to decrease the emission of pollutants. We are committed to enhancing our green management capabilities by securing talented individuals and providing training in all of our facilities and to our business partners.



• Changwon Plant 2

# Greenhouse Gas/Energy Management

Controlling greenhouse gases during the manufacturing process has become an important issue for companies due to the growing concerns over the global climate change. LG Electronics acknowledges the importance of taking action against climate change and is actively working to implement initiatives with the goal of reducing greenhouse gases by 75,000 tons by 2012 and 150,000 tons by 2020.

We are continuously enhancing our production energy efficiency through the optimization of the manufacturing system and process, while establishing a greenhouse gas inventory for each facility. Efforts to enhance production are being carried out at each facility based on its individual characteristics. We are actively striving to reduce greenhouse gas emissions in the entire manufacturing process.

- **Participating in the CDP**

LG Electronics participated as a “newly registered company” in the 6th CDP, an international carbon information disclosure program where a company’s management strategy related to countering climate changes is analyzed and sent to financial and investment institutions around the globe. Among the newly registered companies, we received the “Woorim Award” because of our selection as an “Excellent Company.”

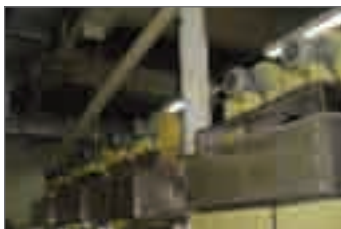
We are confident that participating in the CDP and disclosing greenhouse gas information will play a positive role in investors’ decisions to invest in our company. We remain committed to the goals of the CDP and intend to participate in future programs.



• 6<sup>th</sup> Woorim Award

- **Optimization of the Production System and Process**

We are also working to reduce greenhouse gas emissions by optimizing our product systems and processes as well as replacing our low efficiency equipment with higher efficiency equipment. The followings are notable examples.



• Hot Steam Fan



• Vacuum Pump(Improvement)

### Process Improvement Activities: Example of Our Changwon Facility (January ~ March 2008) (Improvement in the Air Conditioner Compressor Component Drying Process)

Investment/Savings	KRW110 million / Annual KRW160 million / Reduction of 721 tons of Greenhouse Gas
Background & Objective	Improvements were implemented because of the large amount of energy (steam, compressed air, fan motor) consumed during the wash and dry process for the air conditioner compressor component. There was also a need to expedite the cooling process in order to shorten the dry and wait period. Renovations were further required in the overall work environment related to hot wind drying.
Detailed Actions	Previously, this plant employed the hot wind drying method that uses steam and compressed air to dry the manufactured components after washing. By replacing this process with an electric vacuum pump, we were able to reduce the amount of energy used and enhance productivity. These changes also improved the overall work environment by reducing noise levels and temperature.

## Process Improvement Activities: Example of Our Pyongtaek Facility (November 2007 ~ March 2008) (Utilization of the Natural Cooling/Heating System)



• Natural Cooling/Heating System

Investment/Savings	KRW 141million / Annual KRW 106.6million / Reduction of 646 tons of Greenhouse Gas
Background & Objectives	Air conditioning was required year-around to reduce the temperature in the some departments such as the Lens Assembly in F2 Building and the Clean Room and SMT Room in G2 Building. Cold water is needed even in winter to supply cool air. As a result, the cooling equipment (1 Turbo Cooler unit, 880usRT) operates throughout the year. This need to continuously operate the cooling equipment and supply cold-water results in excessive power consumption. Cooling equipment maintenance and repair expenses have also increased because of the higher operating time.
Detailed Actions	During winter, the system utilizes cold air from the outside to cool the areas that need to be air-conditioned year-around. As a result, power consumption has decreased because it is not necessary to operate the cooling system year-around. To operate this new system, heat exchange equipment and new pipes were installed to link the pipes for the existing cooling equipment with the heat exchanger.

### ● Established the Green House Gas Inventory

In 2007, LG Electronics created a strategy to manage and reduce greenhouse gases. This strategy included establishing a greenhouse gas inventory. In 2008, we completed the establishment of the greenhouse gas inventory for 12 of our facilities in Korea. Our greenhouse gas inventory was reviewed and verified by Norway's DNV, green house gas verification organization. This verification was based on our greenhouse gas management system and our attempts to reduce greenhouse gas emissions. Our efforts and the objective of the disclosure of our greenhouse gas emission amounts were acknowledged internationally. By the end of 2009, we plan to establish greenhouse gas inventories for thirty-two facilities, including some facilities outside of Korea.

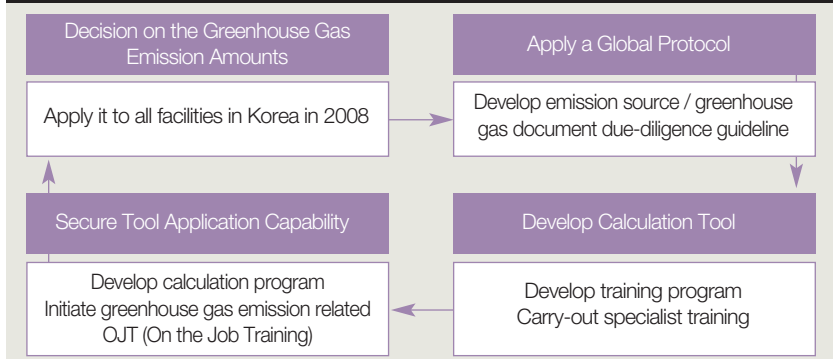
### ● Calculating the Emission Quantity

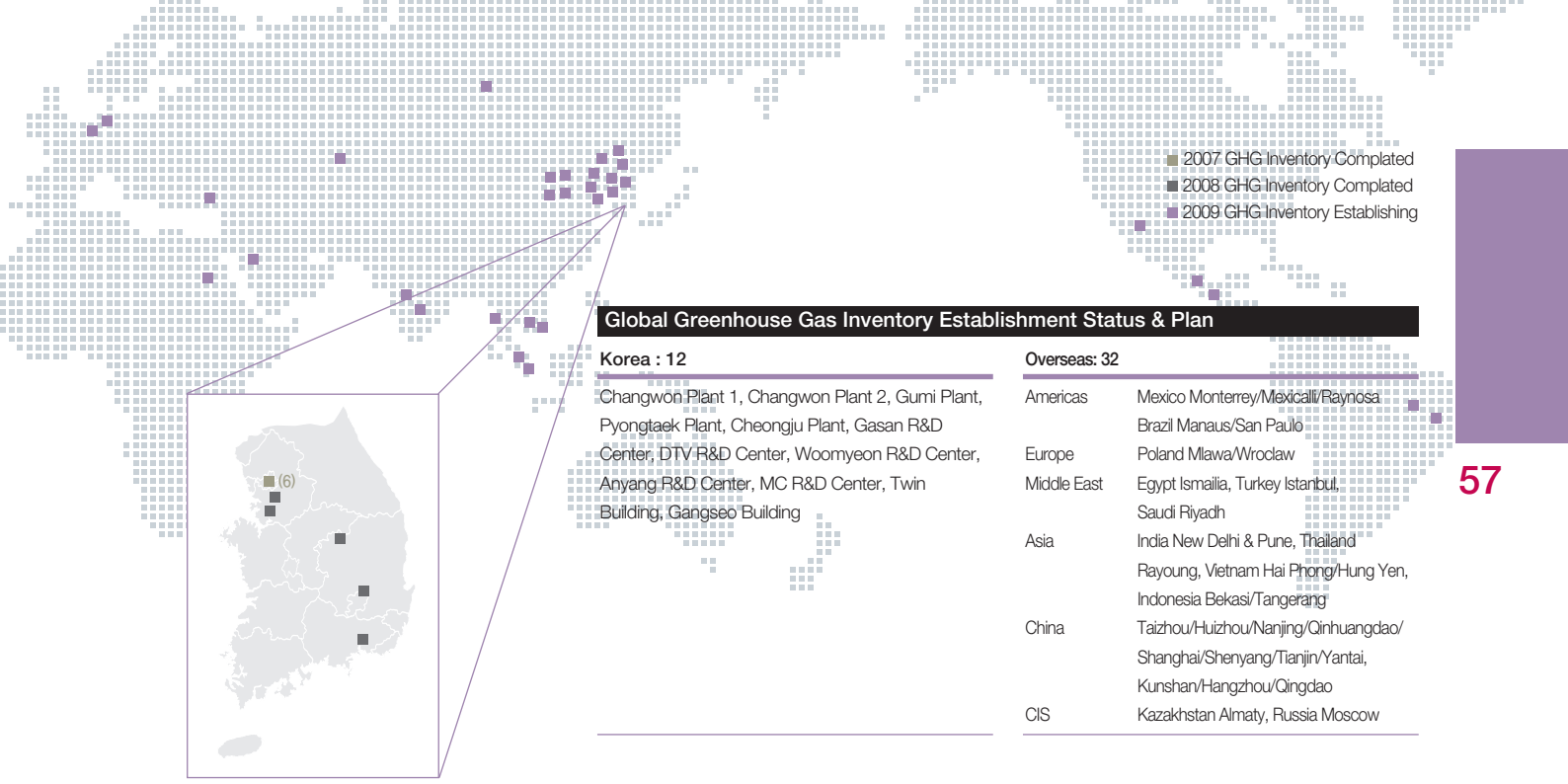
A control method was used to establish the organization boundaries for LG Electronics. The control method computes 100% of the greenhouse gases emitted by the operations under the company's control. The organization boundaries of LG Electronics include four plants, five research and development centers, the Kangseo Building, the Twin Tower and maintenance office building, and the employee's quarters in Korea. The emission quantity calculation report work process is as follows:



• 3rd party verification on green house gas emissions

### Emission Quantity Calculation Report Work Process





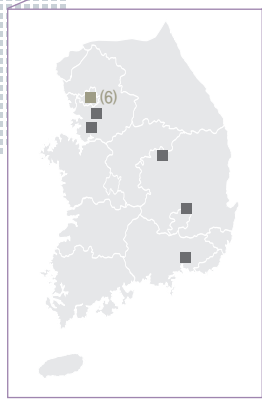
**Global Greenhouse Gas Inventory Establishment Status & Plan**

**Korea : 12**

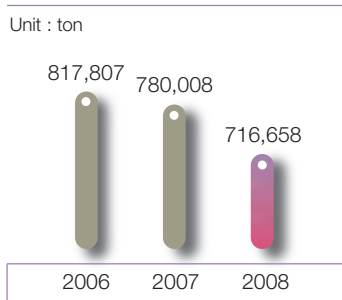
- Changwon Plant 1, Changwon Plant 2, Gumi Plant, Pyongtaek Plant, Cheongju Plant, Gasan R&D Center, DTV R&D Center, Woomyeon R&D Center, Anyang R&D Center, MC R&D Center, Twin Building, Gangseo Building

**Overseas: 32**

Americas	Mexico Monterrey/Mexicali/Raynosa, Brazil Manaus/San Paulo
Europe	Poland Mlawa/Wroclaw
Middle East	Egypt Ismailia, Turkey Istanbul, Saudi Riyadh
Asia	India New Delhi & Pune, Thailand Rayong, Vietnam Hai Phong/Hung Yen, Indonesia Bekasi/Tangerang
China	Taizhou/Huizhou/Nanjing/Qinhuangdao/Shanghai/Shenyang/Tianjin/Yantai, Kunshan/Hangzhou/Qingdao
CIS	Kazakhstan Almaty, Russia Moscow



**Greenhouse Gas Emission Amounts at LG Facilities in Korea**



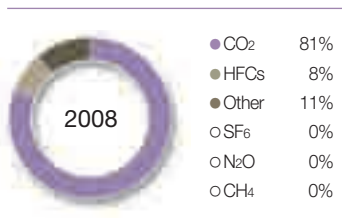
● **Greenhouse Gas Emission Amounts in Korea**

LG Electronics has undertaken efforts to analyze the source and amount greenhouse gases that are emitted by its operations. Due to its operations in Korea, LG Electronics emitted 716,658 tons of greenhouse gas in 2008. This amount is approximately a 15.3% reduction from 817,807 tons in 2006. These figures were derived by adding-up the emitted gases by type of fuel and the greenhouse gases from each facility. Looking at the composition of emitted gases, Scope2 gases, which are emitted from the use of power and steam, took up 70% of total gases or 502,190 tons of greenhouse gas. Scope1 gases, which consist of gases from fixed and shifting combustion equipment and gases emitted from the manufacturing process, took up 18% of total gases, or 128,201 tons. Scope3 gases included gases emitted from commuting shuttle buses, the Twin Towers, the DTV research and development center at Seoul National University (not operated by LG Electronics), and gases emitted at the products stage. The remaining percentage of gases included R-22 refrigerants, fire fighting Halon, and other greenhouse gases.

● **Energy Consumption**

LG Electronics consumed a total of 11,105TJ energy in 2008. This was a reduction of 7.5% compared to the previous year. This does not include energy consumption for transportation within the factories. The decrease in power consumption was due in part to a corporate-wide effort to reduce electricity consumption (including waste elimination and equipment improvement). The operational discontinuation of the Gumi A1 Plant also played a substantial role in reducing energy consumption. Although there are no restrictions on the amount of energy that can be used, we report our energy consumption to the Korea Energy Management Corporation. We are continuing to try to reduce energy usage.

**Greenhouse Gas Emission Amounts by Type (Domestic Facilities in 2008)**



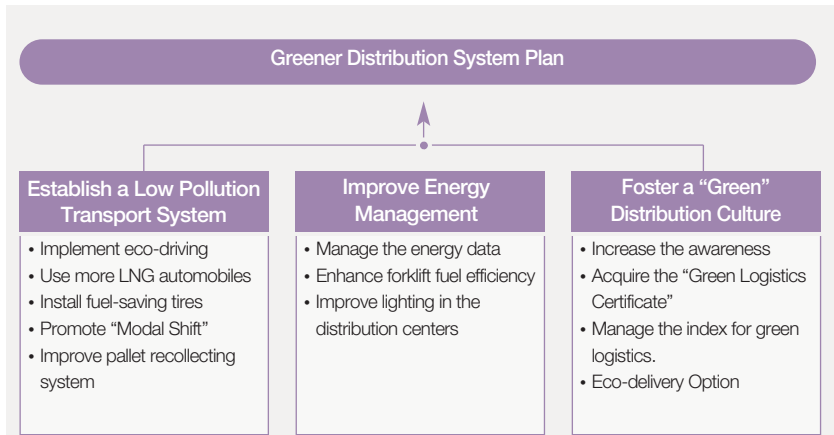
**Energy Consumption at LG Electronics' Facilities in Korea**

Period	Energy Consumption (TJ)				Total
	Power	Steam	LNG	Others	
2007	10,369 (86.41%)	546 (4.55%)	1,076 (8.97%)	9 (0.07%)	12,000 (100.00%)
2008	9,698 (87.33%)	422 (3.80%)	979 (8.81%)	7 (0.06%)	11,105 (100.00%)

\* Energy consumption for transportation between the factories is excluded.

# Transportation

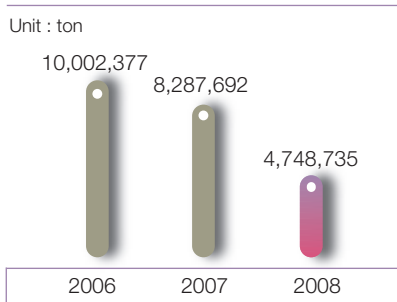
LG Electronics acknowledges the importance of reducing greenhouse gas emissions in the distribution sector. We plan to steadily initiate reduction activities by implementing twelve tasks within three categories. We believe this will enable us to take the lead in establishing a “Green Logistics Movement.” Initially, we completed a diagnostic evaluation of logistical activities in Korea and calculated the greenhouse gas emissions that result from these logistical activities in Korea. To effectively reduce greenhouse gas emissions that result from distribution, we categorized our plan into three segments that will help reduce emissions step-by-step. The three segments are i) create a low pollution transportation system, ii) improve energy management, and iii) establish a “Green Logistics Movement.”



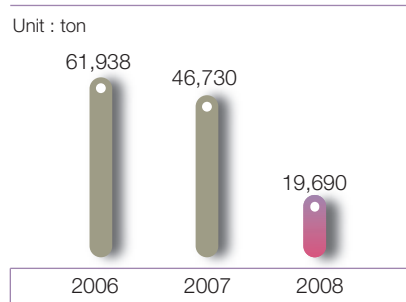
# Resource Utilization

LG Electronics is working to efficiently utilize resources during business operations. The total amount of water used in our facilities in Korea was to 4,748,735 tons in 2008. As a result of our reduction activities, we reduced our water usage by 338,957 tons. 3,200,000 tons was reduced due to the transferring of Osan and Cheongju facilities to LG Micron. Our facilities in Korea used 19,690 tons of hazardous substances in 2008. A major reason for this reduction was the transferring of the Osan and the Cheongju facilities to LG Micron.

**Water Consumption Quantity**



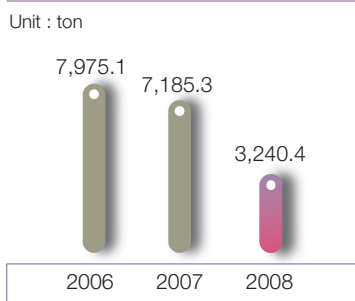
**Hazardous Chemical Substances**



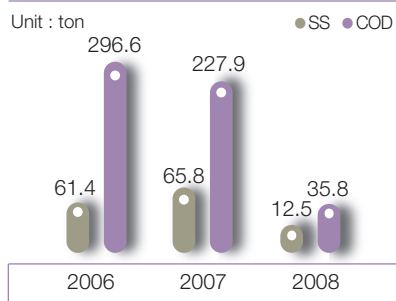
# Pollutant Management

To help combat the environmental effects from production activities, LG Electronics operates a pollution prevention facility. This decrease of discharged of waste water in 2008 was due to the transferring of Osan and Cheongju facilities to LG Micron.

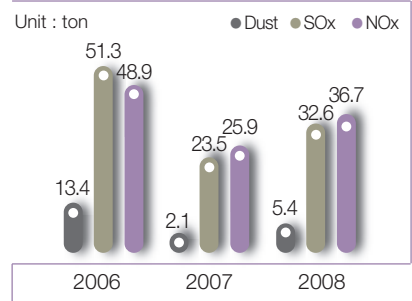
**Discharge of Waste Water**



**Discharge of Water Pollutants**



**Discharge of Air Pollutants**



# Waste Management

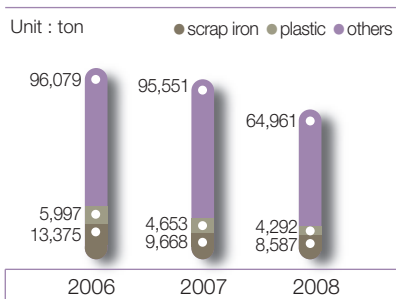
LG Electronics is taking the lead in limiting and minimizing the usage of disposable materials within its facilities. LG Electronics had its efforts to increase resource recirculation and sustainable growth and received the Leading Resource Recycling Company award in 2008. LG Electronics enhanced resource recyclability at the Changwon Plant 1 by reducing waste and received the Presidential Award in Korea. Every year, the Ministry of Environment and the Korea Environment & Resources Corporation gives this award to a company that has demonstrated its commitment to working to reduce its waste and increase its use of recycled materials in the production process.

In 2008, the total discarded materials in all of our facilities in Korea amounted to 262,159.4 tons. Of this amount, 77,839.3 tons were recyclable and 184,320.1 were nonrecyclable, 95% of which was ordinary trash. As part of our effort to strengthen our preventive approach, we are continuously striving to improve our processes and carry out cleaner manufacturing activities.

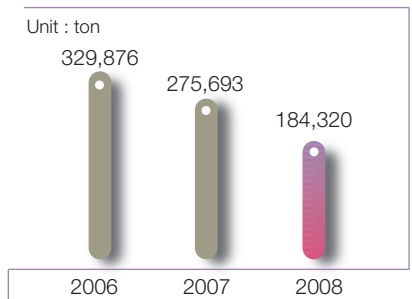
**Composition of Waste**



**Discharge of Recyclable Waste**



**Discharge of Non-Recyclable Waste**





**We're all voluntarily putting  
forth our efforts to make a better world.**







GREEN  
Communication



- Participated in the Eco-friendly Product Exhibition



- Held the Eco-cuisine



- Ramsar Convention Supporter



- Dubai International Environment Conference



- Participated in the CES 2009

## Eco Products Expo 2008

LG Electronics showcased its environmental strategy and activities at the Eco Products Expo 2008 - which was held for three days starting on October 22.

## Eco Cuisine

On December 10, LG Electronics opened the "2008 LG Home Chef Award" in Dubai. Through this event, we opened a new chapter in defining the harmony between ingredients and taste for amateur chefs. Through a regional pre-selection process, fifteen teams from eight countries were selected to participate in the event (Korea, Iran, the United Arab Emirates, Canada, the United States, Saudi Arabia, South Africa, and India). Participants utilized LG's Light Wave Oven to create various cuisines.

## Participated in the Ramsar Conference as a Corporate Supporter

For eight days between October 28 and November 4, 2008, LG Electronics participated as a corporate supporter in the Tenth Ramsar Convention held in Changwon, South Kyongsang Province. The Changwon plant led the support activities at the Upo Wetland and the Joonam Wetland. Each plant must pledge to participate in clean-up activities for nearby natural resources such as rivers and streams.

## Dubai International Environment Conference

LG Electronics held an international environment conference in Dubai. The conference, co-sponsored with the United Nations Office for Project Services (UNOPS) and the government of the United Arab Emirates, was held at Dubai's Jumeira Beach Hotel. During the conference, LG Electronics obtained information regarding trends and successful cases of various countries' efforts to counter environmental pollution and climate change and participated in discussions between the government and private sector regarding how to achieve an eco-conscious society. At the end of the conference, LG Electronics, the Arab Emirates' Ministry of Environment and the UN agreed to a "Green Protocol" to actively cooperate in contributing to a sustainable, environmentally-conscious society.

## CES 2009

At the 2009 CES, which was held in January, LG Electronics announced its plans to reduce greenhouse gases emitted at its manufacturing facilities and to improve the energy efficiency of its products. CES 2009 afforded us the opportunity to demonstrate publicly our strong commitment to achieving these environmental goals.

LG Electronics offers environmental education and training courses, as well as guidance materials, for employees and management to enhance environmental awareness and foster basic knowledge. Through these efforts, LG Electronics can strengthen the ability to minimize compliance risks and proliferate an effective and responsible environmental management system around the company.

- **Delivering Information Online**

Through our corporate intranet environment safety notice board, we distribute educational material and hold training sessions approximately once a week for each business facility. This training not only covers the management of chemical substances, but also regulatory trends and safety-related concerns. All employees and management have access to the education material provided.

- **On-site Education**

Training is held in each business facility. Subject areas include the investigation of waste amounts, hazardous substance management, chemical emissions, and the management of greenhouse gas emissions. Through this kind of training, we are trying to create a cleaner business environment by strengthening professional and practical knowledge throughout the company.



- Members at our European branch listening to an explanation of REACH on February 5, 2009

- **Specialist Training Program**

Since establishing our internal corporate inspector environmental training program in June 2005, we continue to hold occasional training courses for preliminary inspectors who are responsible for auditing our business partners. With respect to those responsible for environmental issues at our partner companies, we started holding partner company specialist training courses in December 2006

### Partner Company Specialist Training Program

Training Course	Date	Target Period	Training
Inspector Training	2005. 6~	Preliminary Inspectors	Occasionally
Partner Company Specialist Training	2006. 12~	Working Level Responsible for Eco-friendly Practices	Monthly

- **Internal Conference and Seminar**

We held a conference related to hazardous materials for overseas branches to share our knowledge on trends of hazardous substance, and our initiatives on countering regulations related to hazardous materials.

# Eco Declaration & Labeling

To enable our customers to more actively select greener products and to utilize the products' environmental information, LG Electronics is providing product environmental information on our homepage and utilizing our Eco Mark.

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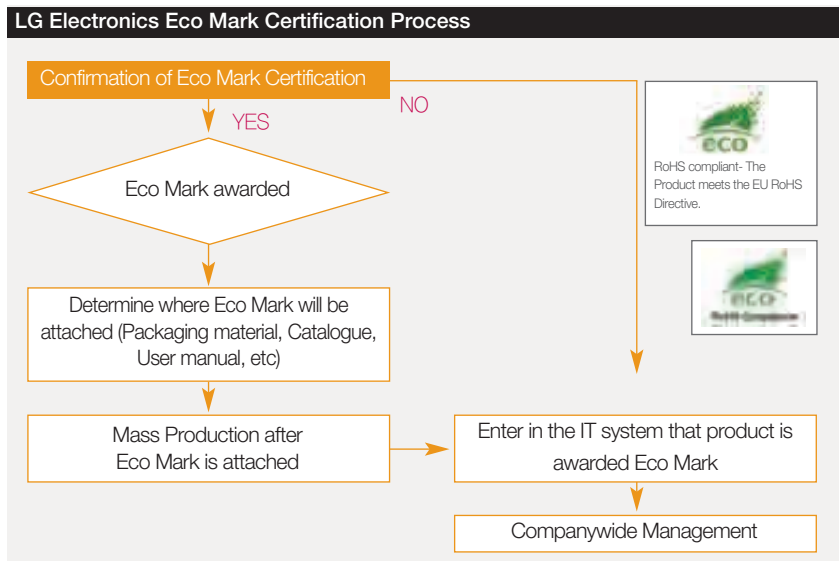
▲ Eco Declaration    ▲ Eco Mark

- **Eco Declaration**

LG Electronics is committed to providing its customers with detailed environmental information on its products. We post to our homepage ([www.lge.com](http://www.lge.com)) environmental information on some of our product. We intend to expand the number of products for which we offer this data.

- **Eco Mark**

To actively promote our eco-friendly activities to the public, LG Electronics developed our proprietary Eco Mark and established our own environmental standards in consideration of the global environmental regulations and the demands of our customers.



Having had certain of our products acknowledged for their eco-friendliness, LG Electronics has received eco labels from various countries. By attaching these labels to our products, we are providing our customers with credible product information and encouraging customers to make a more effective choice.



Korea  
Eco Label



Korea  
Environmental Declaration  
of Products



Germany  
SLG 5 Star



Korea  
Korea Allergy Foundation



U.S.  
Energy Star



Korea  
CA (Korea Air Cleaning Association)



U.S.  
EPEAT



Korea  
FITI Disinfection SF



U.K.  
British Allergy Foundation



Korea  
Carbon Footprint Labeling

# Green History

LG Electronics announced its Environment Proclamation in 1994. Through this the Company not only minimizes the effect on the environment from all our operations, but also to enhance customer value through the development of greener products.



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| <ul style="list-style-type: none"> <li>1992 • Established the Environment Committee</li> <li>1994 • Announced the environmental slogan, "Cleaner Environment"</li> <li>1995 • Received the ISO14001 certificate</li> <li>1996 • Adopted and initiated the LCA</li> <li>• Developed Eco Design software ATROiD with Braunschweig University, Germany</li> <li>1999 • Monitors receive the Eco Flower, a European Eco-Label</li> <li>2000 • Monitors receive the Korean Eco-Label</li> <li>• Participated in the Ministry of Commerce, Industry &amp; Energy's LCA development project with microwave ovens</li> <li>2001 • TVs receive the Korean Eco Label</li> <li>• Refrigerators receive the Eco-flower</li> <li>2002 • Opened the Hazardous Substance Analysis Lab</li> <li>• Established the company-wide Eco Technology Committee</li> <li>• Refrigerators and PDP TVs receive certificate for the Korea Environmental Declaration of Products</li> <li>2003 • Developed the Eco Design System</li> <li>• Started utilizing waste water and waste heat as energy sources</li> <li>2004 • Adopted and operated LGEGP with the partner companies</li> <li>• Completed the establishment of a take-back system in EU</li> <li>• Established LG Electronics' Eco Mark standard</li> <li>• Mobile phones certified to the Korea Environmental Declaration of Products</li> <li>2005 • Received the UL certification for the Hazardous Substance Analysis Lab</li> <li>• Developed and adopted light degradable packaging materials</li> <li>• Expanded the application of energy saving targets to all domestic facilities</li> <li>• Monitors satisfied the EU RoHS Directive</li> <li>2006 • Established the Eco Design Committee (former Eco-technology Committee)</li> <li>• Established the global energy saving target</li> <li>• Developed the Eco Index &amp; established an evaluation system</li> <li>• Developed the HSMS (Hazardous Substance Management System)</li> <li>• Developed and adopted bio-degradable packaging material</li> <li>• Mobile phones received third-party RoHS certification (TÜV PS)</li> <li>• Air conditioners received third-party RoHS certificate (TÜV Rheinland)</li> </ul> | <ul style="list-style-type: none"> <li>2007 • Developed the LGE Green Program IT system</li> <li>• Established the solar cell business unit &amp; solar cell generation system</li> <li>• Established the voluntary global take-back system for discarded mobile phones (45 Countries, 392 Drop Sites)</li> <li>• Developed and applied the LG customized greenhouse gas emission amount calculation system</li> <li>• Established the greenhouse gas Inventory at the Cheongju Plant</li> <li>• Developed a heating/cooling system utilizing new recyclable energy</li> <li>• Initiated the use of new recyclable energy at LG Electronics' number Changwon Plant 2</li> <li>• Adopted the Eco Declaration and disclosed it to the public (Mobile Phone, Air Conditioner, Monitor, TV)</li> <li>• Received the Country Eco-management Presidential Award (Air Conditioner)</li> <li>2008 • Established the Eco Strategy Team</li> <li>• Establish greenhouse gas inventories in 12 domestic facilities &amp; received the third party verification from DNV</li> <li>• Established the take-back system in the U.S. (Waste Management Co., Ltd. is entrusted to operate the system)</li> <li>• Received the CDP Woorim Award</li> <li>• Held the Dubai International Environment Conference</li> <li>• Supported partner companies to set up EMS (Environmental Management System) (Part of Korean government project)</li> <li>• Projectors received the Korean Eco Label</li> <li>• Introduced the solar cell bluetooth hands free kit</li> <li>• Received the Korean Carbon Footprint Labeling certification (trial operation) &amp; the Korean LOHAS certification</li> <li>• Received the grand prize for Korea's Health Housing in the air conditioner category</li> <li>• Pyongtaek Chemical Analysis Lab received formal approval as a PAHs substance analysis lab by Germany's TÜV SUD</li> </ul> |
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If there are any additional information required or any opinion / suggestion regarding this Report, please contact the following:

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\* You may access our homepage at ([www.lge.co.kr](http://www.lge.co.kr)) for more information.

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