Samsung Electronics

Environmental Report

Contents

Green Management Framework

Basic Philosophy of Green Management

Vision and Slogan

Samsung Electronics' green management strategy enables us to grow sustainably and invest in the future of both humanity and nature. We established our green management vision based on the underlying philosophy that we have a duty to help build a prosperous society and preserve the environment through business activities that respect people and nature. Our green management activities are reinforced under our slogan of 'PlanetFirst.'

Basic Philosophy, Vision and Slogan of Green Management

Basic Philosophy	Contribute to building a prosperous society and preserving the environment, through business activities that respect people and nature.
Vision	Providing Green Experience, Creating Sustainable Future.
Slogan	"PlanetFirst" represents Samsung Electronics' commitment to sustainable development and social responsibility through eco-driven business and management activities.

Green Management Policies

Samsung Electronics is committed to leading way to a sustainable society. Through our green management activities, we are contributing to the prosperity of humanity and the conservation of the natural environment.

1 **Global Green Management System**
We have established a global green management system, ensure full compliance with all environment safety and health regulations at all our operation sites with factories, and enforce strict EHS internal standards.

2 **Life Cycle Responsibility for Products and Services**
We take full responsibility for ensuring minimal environmental impact and maximum safety at all stages of the product life cycle, including parts and raw materials acquisition, product development and manufacturing, distribution and use, repair and maintenance, and end-of-life disposal, reuse, or recycling.

3 **Green Manufacturing Process**
In order to minimize the release of greenhouse gas emissions and pollutants, we have established manufacturing processes that employ the best available clean manufacturing technologies and improve resource and energy efficiency.

4 **Protection the Environment**
We take action against climate change to preserve the environment and protect local communities. We disclose our green management policies and achievements to both our internal and external stakeholders.

Green Management Materiality Test

Materiality Test Process

Samsung Electronics has conducted materiality tests in order to identify major environmental issues affecting its management activities and systematically managing them. Through materiality tests, we collect opinions of our internal and external stakeholders, and analyze our business management status, as well as risk factors and opportunities. Through such analysis, we have developed and implemented green management strategies focusing on key issues.

Materiality Test Process

Step 1 — Analysis of the external environment
Identify trends of sustainable management-related issues and requirements for Samsung Electronics viewed by external stakeholders.

Step 2 — Analysis of the internal environment
Analyze the current status of sustainable management, as well as risk factors and opportunities viewed by employees at Samsung Electronics. Analyze the business impact of major green management issues.

Step 3 — Materiality Test
Conduct materiality test by gathering opinions of internal and external stakeholders and applying the degree of business impact and stakeholders' degree of interest.

Step 4 — Issue prioritization
Prioritize identified key issues and other issues from the perspective of comprehensive green management strategy.

Step 5 — Strategy development
Develop strategies focusing on priority issues and set goals.

Stakeholder Engagement

Stakeholder engagement has a significant impact on Samsung Electronics' strategic directions and their implementation, as well as its sustainable development achievements. We abide by the Stakeholder Engagement Standard AA1000SES to build a credible and efficient way to deal with opinions gathered from a diverse spectrums of stakeholders, related achievements and responses. In managing stakeholder engagement, we have followed principles of materiality, completeness and responsiveness based on inclusivity.

- Materiality : The Materiality Principle requires an understanding of stakeholders' and organization's major interests.
- Completeness : The Completeness Principle requires an understanding of stakeholders' interests such as perspectives, requirements and achievements.
- Responsiveness : The Responsiveness Principle refers to consistently responding to material interests of stakeholders and an organization.

| Stakeholder Engagement |

Internal Risk Management

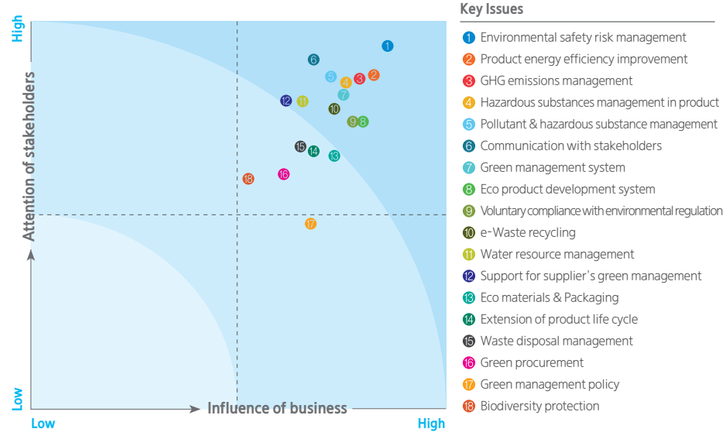
Samsung Electronics conducts an internal analysis of its sustainable management status and risks, and assesses their impact on our business. We take into consideration strategic alignment of risks, their financial and reputational impact to the company in an integrated manner.

Key Risks and Management Activities

Type	Key Issues	Risk Management Activities
Physical risks	Rise in price of raw materials and energy	• Improving energy-efficiency of existing facilities and building new high performance facilities
		• Development of energy use reduction policies
	Intensified water shortage	• Implementation of water resource management strategies and water-related risk management structure
Regulatory risks	Implementation of energy & greenhouse gas reduction policies	• Energy and GHG reduction activities at operation sites
		• Energy efficient product development
	Strengthened product-related environmental regulations	• Regular monitoring and compliance activities of regulations on energy, hazardous materials and recycling
Indirect risks	Changes in market and industry	• Development of eco-products and strengthening of green Marketing activities
	Increased competition for eco-technologies	• Development and utilization of eco-friendly materials
		• Release of innovative eco-friendly products
Social/ cultural risks	Changes in consumer preferences	• Expansion of consumer green marketing
		• Environmental communication with local community residents
	Increased stakeholder demands	• Increased stakeholder communication and response to demands
		• Responsive information disclosure

Materiality Test Matrix

Samsung Electronics' top priority issues identified through materiality tests include environmental safety risk management, improvements in product energy efficiency, GHG emissions management, and product chemicals management. Communication with stakeholders, green management system, and Eco product development system is also pinpointed as crucial areas. Samsung Electronics will reflect all of these findings from annual materiality tests in its establishment of goals and strategies and the identification of improvement tasks across all aspects of the environment.



| Green Management Materiality Matrix |

Strategies and Goals

Development of Strategies

Samsung Electronics has developed the Eco-Management 2020, its mid-to-long term strategy to be achieved within 2020, by reflecting major issues identified through materiality tests and analyzing achievements of the EM 2013 (Eco-Management 2013), its mid-term green management plan for the period between 2009 and 2013. Samsung Electronics will enhance its internal competence and further improve its green management standards by gathering opinions of internal and external stakeholders and analyzing various risk factors.

Achievements of the Mid-term Plan (Eco-Management 2013)

In 2009, Samsung Electronics announced EM 2013 (Eco-Management 2013) at its green management declaration ceremony in an effort to minimize environmental impact and ensure substantiality of green management. As of 2013, the deadline for the mid-term plan, Samsung Electronics successfully fulfilled its key objectives of a 50% reduction in GHG emissions intensity (tons per revenue in KRW) and a 100% launch of eco-friendly products that are eligible for global eco marks.

EM2013 Core KPIs and Achievements

Area	Indicator	Base (Base Year)	2013		Achievement rate (%)
			Goal	Performance	
GHG reduction (Korea)	GHG emissions relative to sales (tons CO_2/KRW 100 million)	7.44 (2008)	2.38*	2.23*	107
Eco-Product development rate	Proportion of Good Eco-Products (%)	54 (2009)	100	100	100
	Proportion of Good Eco-Devices (%)	72 (2010)	100	100	100

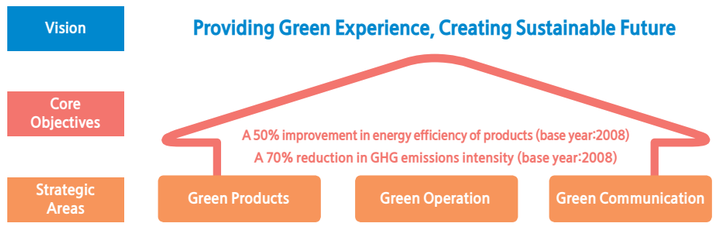
* This is an adjusted figure resulting from the corporate reorganization (which involved the separation of the LCD division from the company and the integration of the LED business into the company) undertaken in April 2012.

Investment in Green Management and Support for Suppliers

Area	Description
Investment in green management	Cumulative investment worth 5.95 trillion USD (product R&D: 2.97 trillion USD, environmental facilities at operation sites: 2.98 trillion USD), Exceeding the initial goal (5.25 trillion USD) by 22%
Support for suppliers	Providing support for global suppliers including the Environmental Management System (ISO 14001) and greenhouse gas management education

Establishment Consecutive Mid-to-long term Plan (Eco-Management 2020)

After achieving its mid-term green management goals, Samsung Electronics established the Eco-Management 2020 (EM 2020), its mid-to-long term green management plan in 2014 to proactively respond to environmental change and evolve into a green management leader in the future. Under the vision of "Providing Green Experience, Creating Sustainable Future" it plans to improve energy efficiency in products by 50% and reduce GHG intensity by 70% by 2020, compared to the 2008 baseline. In addition, Samsung Electronics will continue to implement green management initiatives by identifying strategic tasks in three areas of Green Products, Green Operation, and Green Communication.



| EM 2020 Strategies |

Implementation Structure

Consultation Organizations

Samsung Electronics has set up various green management organizations and clarified their responsibilities and authority, thereby striving to ensure systematic green management practice. The Customer Satisfaction & Environment Center, under the direct control of the CEO, sets up global green management strategies, while controlling the company's overall green management activities, including Eco-design, hazardous substance management, compliance with energy regulations, and global e-Waste recycling. The Environment and Safety Center, another staff organization reporting directly to the CEO, takes a leading role in the implementation of green operations at the company's business sites across the world. It takes charge of environmental management, including management of GHG emissions generated over the entire product life cycle from product manufacturing to distribution and use of products, as well as water resource management. In 2013, Samsung Electronics set up the CSR Committee under the Board of Directors that supervises the company's Corporate Social Responsibility activities and other activities aimed to protect public interest. It ensures substantiality of Samsung Electronics' Green Management through consultations on various topics, ranging from social contribution, shared growth, and fair trade to environmental conservation.

Corporate Green Management Consultation Group

Name	Tasks	Head	Frequency
Environmental Safety Council	Deliberations on corporate environmental strategies and discussions on pending issues of operation sites	CFO	Biannual
Eco-Product Council	Establishment of plans and strategies for the development of high-efficiency eco-products	Head of CS & Environment Center	Biannual
EHS Department Head Meeting	Discussions on corporate EHS strategies, including chemicals and health and safety	Head of Environmental Safety Center	Six times a year
Climate Change Working Group	Decisions on practical tasks for Climate change mitigation and progress monitoring		

Enhancement of Employees' Green Capabilities

Employee Training

Through the training courses, Samsung ensures that its employees fully understand the green management. The health and safety training course offered online on a quarterly basis deals with topics such as hazardous substances, working environment and health care. Its educational impact is boosted by featuring diverse interactive content, including quizzes and discussions. The new-hire training course is designed for new employees and new recruits and is held 12 times per year. The company also runs a supervisor training course designed for heads of departments in business divisions, as well as a special training course for employees who are involved in EHS tasks.

Type	Course	No. of trained employees	Frequency
Regular training	Regular safety and health training	29,000	Quarterly
New-hire training	Training designed for new employees and new recruits	6,200	12 times a year
Supervisor training	Training designed for heads of departments in all business divisions	280	Biannual
Special training	Special training for employees involved in EHS	430	As often as needed

| Regular training (online) |

| New-hire training |

| Supervisor training |

Performance Management

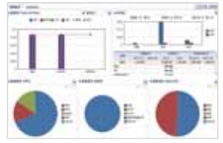
Employee Compensation

In order to encourage employees' proactive participation, Samsung Electronics provides diverse compensation packages to organizations and individuals in recognition of their outstanding contributions to green management. Each year, Samsung Electronics presents the 'SAMSUNG GROUP Green Management Awards' to those of its operation sites and suppliers who have made outstanding achievements in the area of green management. Also, the 'Samsung Electronics Annual Awards' recognizes the contributions made by the company's organizations and individuals in the area of green management with prizes and additional points on their performance appraisals.

Operation of the Global EHS System (G-EHS)

Samsung Electronics operates IT system, called the G-EHS (Global Environment, Health & Safety System) to manage environmental information including the company's goals and achievements related to the reduction of GHG emissions, compliance with product environment regulations, and environmental safety accident prevention.

G-EHS System



| GHG management |

| Product environment management |

| Environmental safety management |

Environmental Cost Management

Samsung Electronics systematically manages its environmental costs including environmental investments and consumption through G-EHS. The environment department at each operation site manages the budget required for environmental facilities and their operations. The CS & Environment Center tallies the environmental costs and expenses of each operation site annually and presents the entire company's total yearly environmental costs and expenses. The environmental costs of each operation site based in Korea are tallied according to the guidelines of the Korean Ministry of Environment. The information is revealed to stakeholders upon request. The environmental budget of every operation site is planned and implemented in accordance with the rules of the company's management planning process.

Green Investment in Operation Sites (Unit : Million USD)

Category	Investment Description	2011	2012	2013
Investment in green facilities	Investments in facilities to prevent air and water pollution and reduce waste	326	209	235
Site operation expenses	Expenses paid to operate pollution prevention and treatment facilities	310	235	291
Total	-	636	444	526

* The 2011 figures include investments in the LCD division, while 2012 and 2013 figures do not as the division was separated from Samsung Electronics to become Samsung Display Co., Ltd. in 2012.

Internal and External Environmental Audits

Samsung Electronics carries out internal and external environmental audits on an ongoing basis in order to determine the current status of its environmental management and fix any potential problems. The company conducts internal audits to examine the status of hazardous substance and energy management at each operation site across the world annually. It also operates the eco-partner certification system to assess its supply chains' environmental management status. When building or expanding its overseas production facilities, it requests independent agencies to examine the entire facility infrastructure to ensure that the facilities qualify for the extension of their ISO 14001 and OHSAS 18001 certificates.

Environmental Information Disclosure

Through the publication of its annual sustainability report, Samsung Electronics discloses its accomplishments in green management in areas such as green management systems, eco-products, eco-friendly operation sites and green communication. The sustainability report, alongside further information is publically available on the Samsung website; ensuring stakeholders can readily access any required information. Samsung Electronics also participates in the Carbon Disclosure Project (CDP), disclosing climate change activities and accomplishments.

| Samsung Electronics' official website |

| Sustainability Report 2013 |

Support of Suppliers' Green Management

Environmental Management System (EMS)

Samsung Electronics supports its suppliers' Environmental Management Systems (EMS). Founded in 1981, the Samsung Supplier Council meets quarterly at its directors' meetings and subcommittee meetings to exchange information on the industry and encourage suppliers to carry out innovative management activities, including green management. Through the Environmental-Chemicals Integrated Management System (e-CIMS), Samsung Electronics assesses whether a supplier in question is EMS-certified and whether it uses hazardous substances in its production process or not. Through this systematic approach to the issue, the company eventually ensures that the supplier's products never contain any hazardous substances.

Suppliers' Acquisition of the EMS (ISO 14001) Certification (Based on April 2013)

Region	Korea	China	Asia	Others	Total
No. of certified companies	207	174	141	65	587

Support for Reductions in GHG Emissions

Samsung Electronics supports its suppliers' efforts to reduce their GHG emissions in a variety of ways. As of 2013, Samsung Electronics carried out energy diagnoses of five of its representative suppliers and invited them to fulfill more than 24 energy consumption reduction tasks. The company will continue to support its suppliers' efforts to reduce their energy consumption.
For further details of suppliers' GHG emissions, please refer to 'Suppliers' Emissions' on page ENV21.

Management of Hazardous Substances (Eco-Partner Certification)

Samsung Electronics implements an internal Eco-Partner Certification system to help all of its suppliers to continue to qualify as its eco-partners through diagnosis programs and education. In 2013, the company tested all the raw materials of its more than 800 suppliers to minimize negative impacts in its suppliers' parts and materials. For details of Samsung Electronics' eco-partners, please see 'Supply Chain Chemical Management' on page ENV25.

Green Procurement

In an effort to expand green procurement, in 2007 Samsung Electronics established the internal green purchasing guidelines and regulations that give preference to eco-products. In addition to the green purchasing program, Samsung Electronics urges its operation sites to purchase eco-friendly office supplies, while recommending its employees to buy eco-products for their personal use through green management education. For the full details of green procurement, please refer to 'Green Procurement' on page ENV25.

Ban on the Use of Conflict Minerals

As a member company of the Electronic Industry Citizenship Coalition (EICC), Samsung Electronics participates in the ban on the use of conflict minerals that can cause various social problems, including child labor exploitation, environmental pollution and prolonged wars in conflict zones. The company takes part in the EICC's major programs, including the development of methods for investigating the use of conflict minerals and the certification program for smelting factories.

Ban on the Use of Illegal Timber

In order to fulfill its corporate social responsibility, Samsung Electronics strives to conserve biodiversity by using sustainable timber. The company is expanding the use of paper with recycled content and FSC (Forest Stewardship Council)-certified paper for its product packaging and manuals. It used a 100% recycled paper for the manual of the Samsung Galaxy S4, the company's flagship mobile phone in 2013.

External Recognition and Awards

Samsung Electronics' continuous efforts to reduce GHG emissions and green management at its operation sites, as well as its launch of a wide range of Eco-Products, have earned it the recognition for excellence in global green rankings.

2013 Recognition of Excellence in Environmental Management

Samsung was first included in the Dow Jones Sustainability Index (DJSI) in 2009, and has since been included for five consecutive years, ranked against industry leaders for its sustainable management. It has also been ranked among the top-50 global companies by Carbon Disclosure Project (CDP) for five consecutive years from 2009; Samsung is the first Korean company to achieve this. Samsung Electronics is committed to continuing its efforts to manage and reduce GHG emissions in the future.

Name	Released	Contents
Dow Jones Sustainability Index (DJSI)	Sept.	Ranked No. 1 for environmental preservation in the semiconductor sector among 3,000 Dow Jones companies
Carbon Disclosure Project (CDP)	Sept.	Incorporated into the CDLI(Carbon Disclosure Leadership Index) for five years in a row, first time for a Korean company incorporated into the CPLI(Climate Performance Leadership Index) "A" grade, the only company in Korea
Best Global Green Brands ranking (Interbrand)	June	Ranked as the 16th eco-friendly brand among the world's top 50 eco-friendly brands
ESG Evaluation by the KCGS (Korea Corporate Governance Service)	Oct.	Awarded 'class A' among Korea's listed companies in the area of environmental protection

2013 Environmental Awards

Governments and organizations around the world host environmental awards in various forms to introduce eco-friendly features of products to consumers and promote companies' green management activities. Samsung Electronics received numerous awards for its eco-products such as energy-efficient refrigerators, TVs and water-saving washing machines, as well as for its green management activities including its voluntary recycling programs implemented in different countries.

Region	Name	Host	Released	Contents
Global	SEAD Global Efficiency Medal competition	SEAD	Sept.	6 monitors win global SEAD awards (Europe-2, North America-1, Global-2, Austrailia-1)
Korea	Green Star Certification Award	Korea Management Association	Apr.	Washing machine, Refrigerator, Kimchi Refrigerator, Air conditioner
	Green Product of the Year	Green Purchasing Network	June	LED TV, Monitor
	Energy Winner Award	Consumers Korea	July	Totally 9 energy-efficient products (TV, Refrigerator, Air conditioner, Washing machine, Monitor, etc.)
	Korea Consumer Well-being Index Certification Award	Korean Standards Association	Aug.	Galaxy S4, Smart TV
	CDP Korea Excellence Award	Korea CDP Committee	Nov.	Accepted to the Carbon Management Global Leaders Club
USA	CES Eco-design Award	Consumer Electronics Association (CEA)	Jan.	Notebook, Printer, Semiconductor, LED
	Electronic Recycling Industry Award	Illinois Environmental Protection Agency (EPA)	Jan.	Recognized for exceeding the 2012 recycling goals in Illinois State
	ENERGY STAR Partner of the Year - Sustained Excellence Award	Environmental Protection Agency (EPA)	Mar.	Recognized with EPA's highest honor The ENERGY STAR Partner of the Year Sustained Excellence Award
	Energy Star Top Pledge Driver recognition	Environmental Protection Agency (EPA)	Apr.	Recognition for active involvement in ENERGY STAR environmental campaigns
	Salt Lake City Recycling Recognition	Salt Lake City	Apr.	Recognized for supporting recycling activities
	IDEA Award	IDSA	May	Printers with the concept of using recycled paper
	ENERGY STAR Emerging Technology Award	Environmental Protection Agency (EPA)	June	Recognition of the most energy-efficient clothes dryers on the market in the United States(6 models)
	BLI Outstanding Achievement Award	Buyers Laboratory Inc (BLI)	July	Recognition of energy efficient color laser and multi-function printer devices
	BGCA Blue Circle Award	Boys and Girls Club of America (BGCA)	Aug.	Recognition of outstanding efforts in educating youth about saving energy and protecting the climate
	eCycling Leadership Awards	Consumer Electronics Association (CEA)	Oct.	Recognized for leading recycling efforts in the electronics industry
	State Electronics Challenge Award	Northeast Recycling Council (NERC)	Oct.	Recognition of supporting recycling activities
UK	Green IT Award	BTC	May	Recognition for carbon reduction of Galaxy Note
	Independent Business Award	Retailer Association	June	Washing machine in the energy-saving category
	Sustainability Leaders Awards	Edie	Nov.	Washing machine in the "Sustainability Product Innovation" category
Germany	EISA Green Award	European Imaging and Sound Association (EISA)	Sept.	Galaxy S4 in the Green Smartphone category
Italy	Eco-hi tech Award	Assodel	Oct.	Recognition for carbon reduction of Galaxy S4
Hungary	E.ON Energy Conservation Award	E.ON	Oct.	Energy efficient vacuum cleaners
Russia	Trusted Brands Award	Readers Digest	Oct.	Selected as an eco-friendly brand in the categories of large and small home appliances
India	Golden Peacock Award	IOD	June	Recognition for eco-friendliness of the LED TV
	Energy Conservation Award	Ministry of Power	Dec.	Energy efficient refrigerator
China	Top Green Company Award	Daonong	Apr.	Recognition for green management in China
	Energy Conservation Award	Energy Conservation Association	May	Awarded for energy reduction products four consecutive years
	Sustainable development Award	The Economic Observer	Nov.	Recognition for green management in China

CES Eco-Design Innovations Awards

Since 2009 Samsung Electronics has been continuously recognized with Innovations Awards in the "Eco-Design & Sustainable Technologies" category at CES, the world's biggest consumer electronics show. In January 2014, the company's four products - TV, washing machine and two dryers - received the Eco-Design Innovations Awards.

Product	Model	Eco-friendly characteristics
	TV (UN55H7100)	• Uses 30% less power than previous models • Use of Biodegradable plastic & recycled plastic • Life extendable evolution kit
	Washing machine (WF56H99)	• Uses 15% less power than previous models • Wash time reduction technology • Qualified for the ENERGY STAR Most Efficient
	Dryer (DV457)	• Uses less power than previous models • Automatic stain detection and timer functions • Awarded the ENERGY STAR Emerging Technology Award

| 2014 ENERGY STAR Award |

ENERGY STAR Partner of the Year - Sustained Excellence Award

Samsung Electronics has won the 2014 ENERGY STAR 'Partner of the Year - Sustained Excellence Award' from the U.S. Environmental Protection Agency (EPA). This is the second year in a row that Samsung has earned this prestigious ENERGY STAR award for its continued leadership in protecting the environment through activities focused on providing products with superior energy efficiency. In addition, Samsung has also won the 2014 'Climate Communications Award' for its efforts in further educating consumers about the positive impact of energy efficiency and energy-efficient behaviors on climate change.

2013-2014 EISA Green Award winner Galaxy S4

EISA Green Award

In August 2013, Samsung Electronics won the 'EISA Green Award,' the most prestigious award in Europe, hosted by the European Imaging and Sound Association (EISA). Samsung's Galaxy S4 has been selected as an eco-product in the mobile phone category that reduces energy consumption by using a high-efficiency charger and energy-saving mode function. Eco-friendly materials such as 100% recycled paper and soy-based ink were also used for its packaging and manuals.

Climate Change Strategies

Climate Change Response

Risks and Opportunities

• Response Processes

In order to identify risks and opportunities associated with climate change, Samsung Electronics has set up a six-stage response which starts with identification of major issues and ends with adjusted corporate strategies.

| Response Processes |

• Analysis of Risks and Opportunities

Samsung Electronics has established five criteria for evaluating for the risks and opportunities associated with climate change. The company conducts evaluations to determine the significance of the issues and priorities under the following five criteria:

Criteria for Risk and Opportunity Analysis

Criteria	Details
Stakeholder Impact	Concerns of stakeholders such as customers, evaluators, and NGOs
Industry benchmarking	Peers and competitors' reactions to the issues
Degree of impact on the company	Impact on company policies, strategies, and goals, as well as direct financial impacts (include financial impacts)
The company's internal competence	Having reasonable control over the issue, and degree of readiness in capital (HR & asset) to deal with related issues
Risk probability	Probability of events and amount of time left before potential enforcement of a regulation

• Risk Management

Risk Management Activities

Category	Types of Risk	Risk Management Activities
Regulatory risks	• Carbon tax • GHG emissions trading scheme • Regulations on product energy efficiency	• Development of refrigerants with low impact on global warming • Establishment of a plan for GHG emissions trading schemes • Development of energy-efficient products and increased accumulation of 3rd party verified energy labels and certifications
Physical risks	• Typhoons and flooding • Yellow dust and Droughts	• Increased investment in natural disaster prevention and restoration equipment and facilities to mitigate and adapt to climate change impacts • Formulation of scenarios on damage prevention and restoration & investment in HVAC facilities
Other risks	• Reputational risks • Consumer behavior	• Enhancement of internal eco-friendly activities and external communication • Consumer profile research & development of eco-products

• Capitalizing on Opportunities

Samsung Electronics has identified the following opportunities associated with climate change through its opportunity analysis process, and carried out the following opportunity creation activities:

Opportunity Creation Activities

Category	Opportunities	Opportunity Creation Activities
Regulatory Opportunities	• International conventions for learning • Product labeling-related regulations and standards	• Promotion of CDM (Clean Development Mechanism) • Increased acquisition of eco and energy labels
Physical Opportunities	• Rise in average temperatures • Worsening air pollution due to yellow dust and fine particles	• Reinforcement of energy efficient air-conditioner business and building energy solution business
Other Opportunities	• Company reputation • Changes in consumer behavior	• Continuing to rank highly in various external green ratings and improving corporate image • Preemptive response to eco-friendly products required by consumers

Management System

Samsung Electronics has organized its climate change response system as follows.

Climate Change Response System

Organization	Tasks	Host	Meeting Frequency
Environmental Safety Council	Establishment of strategies to tackle climate change and making of decisions concerned	CFO	Bi-annual
Eco-Product Council	Establishment of development targets and implementation strategies for new highly efficient low-power products	Head of the CS & Environmental Center	Bi-annual
Environmental Safety Department Head Meeting	Addressing major issues and strategies involved in climate change responses	Head of the Environment and Safety Center	Bi-monthly
Climate Change Working Group	Decisions on practical tasks for coping with climate change, and monitoring of their progress	Head of EHS Planning Group	Five times a year

Goals and Strategies

In accordance with Samsung's Green Management Plan mid-term goal (EM 2013), Samsung Electronics has set the GHG emissions reduction targets for its operation sites relative to KRW-based sales and those for the product use phase as its key goals and has formulated implementation strategies. The company also manages the GHG inventory of indirect emissions (Scope 3) including employees' business trips, logistics, and suppliers' business activities. It fully supports suppliers' efforts to reduce energy consumption.

Climate Change Response Strategies

Category	Strategies
GHG reduction in facilities operation	• F-gas reductions and efficient use of energy in semiconductor production lines and facility operations
Energy management at operation sites	• Introduction of the Energy Management System (ISO 50001) to all global operation sites in 2013 • A 37% reduction in the energy cost ratio in 2013 (1.01% → 0.64%) • Expected that all manufacturing facilities will be ISO 50001 certified by 2015
GHG reduction at the product usage phase	• A 40% reduction in average product power consumption in 2013 compared to a 2008 baseline • Met the goal of keeping standby power less than 0.5W for all products by 2013
Managing the GHG Scope 3 inventory	• Managing the GHG inventory from logistics, employees' business trips, etc. (since 2009)
Support for suppliers	• Training for GHG emissions calculation and inventory management for suppliers (since 2012)

• GHG Reduction KPIs

As Samsung Electronics continues its annual business expansion, one of the key challenges becomes reducing the absolute quantity of GHG emissions. To be realistic about this challenge the company has made the reduction of GHG emissions over revenue the primary key performance indicator (KPI) against which Samsung measures year-over-year success. The second KPI Samsung examines is the reduction of indirect GHG emissions during the product use phase. The company selected this KPI because the indirect GHG emissions at the product use phase are greater than those generated during the manufacturing phase.

• GHG Reduction Accomplishments

In 2013, Samsung Electronics' GHG emissions relative to KRW-based sales were 2.23 tons of CO_2 per KRW 100 million, or 6% less than the 2.38 ton target. Until 2013, accumulated reductions in GHG emissions at the phase of product use were 88.59 million tons or 5% more than the targeted quantity of 84.69 million tons. The target for 2013 (EM2013), originally set in 2009, was accomplished in 2013.

GHG KPIs and Accomplishments

KPI	Description	2008	2009	2010	2011	2012**	2013**
Korea GHG emissions reductions relative to sales* (ton CO_2/KRW 100 million)	Goal	-	6.85	5.65	4.62	2.87	2.38
	Performance	7.44	5.83	5.11	4.46	2.54	2.23
	Reduction (%, compared to 2008)	-	22	31	40	47	53
Global accumulated reductions during product-use phase (unit: 10,000 tons)	Goal	-	-	1,169	2,695	5,108	8,469
	Performance	-	-	1,529	3,292	5,834	8,859

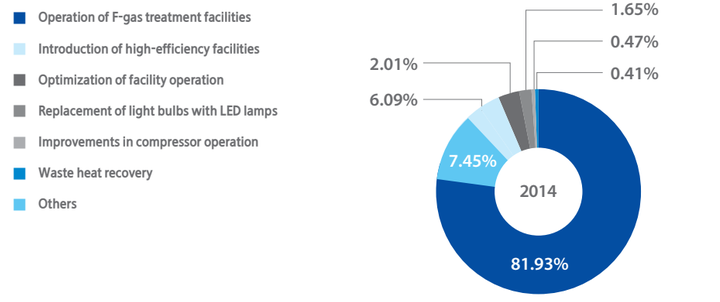
* Korea KRW-based emissions formula: Total CO_2 emissions(1) ÷ (HQ-based sales / price index(2))
(1) Total GHG emissions (converted into CO_2) from Korean manufacturing sites
(2) Producer price indices (PPI) released by the BOK for the years (basis value: 1 in 2005)

** The figures reflect the structural reorganization, including separation of the LCD business division and incorporation of the LED division undertaken in April 2012.

2014 GHG Reduction Plans

In order to meet its 2014 GHG reduction goals, Samsung Electronics operates the F-gas treatment facilities in an appropriate manner and plans to introduce additional GHG reduction measures to the manufacturing facilities. In addition, the company will continue to carry out activities to optimize its facility operations including the introduction of highly efficient facilities, and the replacement of lighting fixtures with LED lamps.

2014 GHG Reduction Plan



Breakdown of Corporate GHG Emissions

2013 GHG Emissions Breakdown (unit : 1,000 tons of CO_2)

| 2013 GHG Emissions Breakdown |

Scope 1 & 2 Management

Scope 1 & 2 Management Processes

• Emissions Management System

Samsung Electronics has identified facilities across the globe where there is the opportunity for high impact to reduce scope 1 & 2 emissions. The targeted sites include six manufacturing facilities and fifty-four Research and Development (R&D) facilities in Korea and twenty-nine production facilities across the globe. The GHG emissions goals for all of these sites are tracked through the company's environmental management system, G-EHS, and communicated to facilities management at each of those sites, relevant personnel in headquarters, and the company's top executives.
The Environmental Health and Safety department tracks the performance of each operating site and sets performance goals. In the event that a reduction goal is not met, this group works with the site in question to set up a plan for remediation.

• Emissions Calculation Standards

GHG emissions in different countries are calculated according to the provisions of the GHG management guidelines for each country. In the event that no national guideline exists, Samsung looks to international standards such as the IPCC Guidelines and ISO 14604.

Scope 1 & 2 Emissions

In 2013, Samsung Electronics' Korea and global GHG emissions amounted to 2.23 tons and 2.13 tons of CO_2 per KRW 100 million in sales, respectively. This was a 12% decrease in Korea and a 9% decrease globally over the course of one year.

GHG Emissions Intensity (Unit : ton of CO_2 /KRW 100 million)

Location	Description	2011	2012***	2013***
Korea*	Goal	4.62	2.87	2.38
	Performance	4.46 (3.13***)	2.54	2.23
Global**	Performance	3.70	2.34	2.13

* Korea KRW-based emissions calculation formula: Total CO_2 emissions (1) ÷ (HQ-based sales / price index(2))
(1) Total GHG (converted into CO_2) emissions from manufacturing sites in Korea
(2) The Bank Of Korea's PPI for the years (with the 2005 PPI being 1)
** Global KRW-based emissions formula: Total global CO_2 emissions ÷ (annual global sales / price index(2))
*** The figures reflect the structural reorganization, consisting of separation of the LCD business division and incorporation of the LED division, undertaken by the company in April 2012.

GHG Emissions (Scope 1,2) (Unit: 1,000 tons of CO_2)

Area	Scope	2011	2012**	2013**
Korea	Scope 1	3,924	1,943	2,031
	Scope 2	6,031	4,061	4,272
	Total	9,955	6,004	6,303
Global	Scope 1	4,045	2,098	2,221
	Scope 2	7,259	5,388	5,797
	Total	11,304	7,486	8,018

* The GHG emissions for 2009 on were altered in June 2011 as required by the national guidelines on the GHG reduction goal management system. The changes were verified by the external third party Korean Foundation for Quality. The recent figures differ from the numbers given in earlier sustainability reports accordingly.
** The figures reflect the structural reorganization, consisting of separation of the LCD business division and incorporation of the LED division, undertaken by the company in April 2012.

Six Major GHG Emissions (Global) (Unit : 1,000 tons of CO_2)

Type of GHG	2011	2012	2013
CO_2	8,378	5,943	6,394
CH_4	2	2	2
N_2O	220	278	254
HFCs	108	134	149
PFCs	859	1,015	1,079
SF_6	1,738	115	139
Total	11,304	7,486	8,018

The Third Party Verification Certificate for 2013 GHG Emissions

Third Party Verification of GHG Data

The third party verification agency for Samsung Electronics is the Korean Foundation for Quality (KFQ).
The objects of verification include Korea and global GHG emissions for 2013.

GHG Reduction Activities

In 2013, Samsung Electronics undertook almost 800 projects to reduce GHG emissions and cut back its GHG emissions by a total of 1.1 million tons. Seventy-four percent of the reductions came from the operation of semiconductor F-Gas treatment facilities, while twenty-six percent came from reduced consumption of electricity and liquefied natural gas (LNG) due to the introduction of highly efficient facilities, improved systems that reuse and recycle waste heat, and the improved of operation methods.

• GHG Reductions through the Introduction of F-Gas Treatment Facilities

In order to treat F-Gas used in semiconductor etching and vacuum evaporation processes, Samsung Electronics has installed and operated F-Gas treatment facilities at each of its production lines since 2007. In the past, treatment devices were directly attached to production facilities to treat F-Gas. Recently, however, the company installed integrated facility upgrades to eliminate F-Gas. As a result, it GHG emissions were reduced by 810,000 tons in 2013.

• GHG Reductions through Improved Efficiency of Utility Facilities

Samsung Electronics' Onyang Plant reduced GHG emissions by 4,500 tons by rationalizing compressed air lines and shortening facility regeneration time, thereby increasing plant efficiency.

• GHG Reductions through Replacement with LED Lamps

In 2013, Samsung Electronics replaced the lighting fixtures at its operation sites and major office buildings in Korea with high-efficiency LED lamps. The replacement initiative also covered lamps outside facilities and buildings. Overall, it saved about 43,191 MWh of electricity and reduced GHG emissions by about 20,138 tons per year.

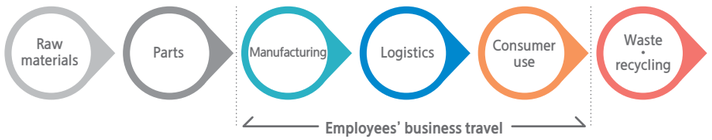
Scope 3 Management

Scope 3 Management Processes

• Emissions Management System

Samsung Electronics aims to identify the potential impact of climate change on its value chain, manage the associated risks and explore potential opportunities from such circumstances.
For its Scope 3 management range, the company has selected the emissions generated by its global suppliers' operation sites, product use phase, product and part logistics, and employees' business travel in Korea and overseas.
Suppliers' GHG emissions are measured through the activity data which they supply to the company. Emissions generated by logistics and business trips are supplied by internal systems for automatic calculation by the G-EHS. GHG emissions during product use are calculated with the information on product energy consumption and product usage scenarios. The company adjusts its GHG reduction goals according to the improvements in energy efficiency every year.

Scope 3 Management Range

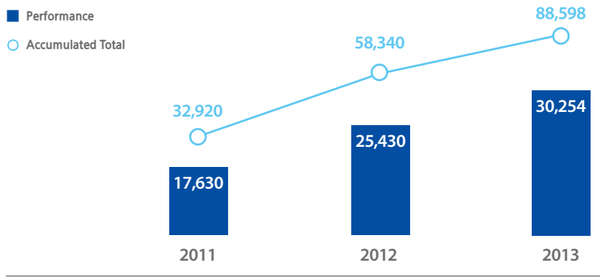


GHG Emissions from Product Use

Samsung Electronics defines indirect GHG emissions from electricity consumed during product use as 'GHG emissions from product-use phase.' The company converts the annual improvement results of each product in terms of energy efficiency through GHG emissions reductions.
Although product sales increase every year, GHG emissions during product-use phase have decreased because of continual improvements in the energy efficiency of Samsung Electronics' products. In 2013, Samsung improved average product energy efficiency by 59% compared to a 2008 baseline and reduced GHG emissions by a total of 30,254 thousand tons. Since 2009, it has indirectly reduced GHG emissions by an accumulated total of 88.59 million tons.

• Emissions Calculation Standards :
Corporate Value Chain (Scope 3) Accounting and Reporting Standard of World Resources Institute (WRI)

GHG Reductions at the Phase of Product Use (Unit: 1,000 tons of CO_2)



* The calculation of the carbon reduction goal is based on the assumption of an annual increase of 10% in the company's sales since 2008.
** The calculation range: all products sold worldwide (parts excluded)

GHG Emissions from Logistics

Samsung Electronics monitors GHG emissions produced by products, materials and parts logistics. The company's logistics emissions are rising every year owing to the marked expansion of its global business. This includes burgeoning subsidiaries and increased production and sales around the world. In 2013, while the emissions from logistics increased by 0.8% from the previous year (to 10.21 million tons), the emissions relative to KRW-based sales decreased by 12.5% over the same period. To reduce emissions from logistics and improve efficiency, the company continues to launch ever lighter and slimmer products, the company continuously looks to find lower-carbon forms of transportation and optimize transportation routes.

• Emissions Calculation Standards :
Samsung uses the Corporate Value Chain (Scope 3) Accounting and Reporting Standard of World Resources Institute (WRI)

GHG Emissions from Logistics by Transportation Mode (Global) (Unit : 1,000 tons of CO_2)

Description		2011	2012*	2013*
Total Emissions		8,441	10,125	10,206
Global	Air	2,017 (24%)	2,952 (29%)	2,652 (26%)
	Sea	6,320 (75%)	7,086 (70%)	7,455 (73%)
Korea	Rail/Road	104 (1%)	87 (1%)	98 (1%)

GHG Emissions from Logistics by Region (Global) (Unit: 1,000 tons of CO_2)

Description	2011	2012*	2013*
Total Emissions	8,441	10,125	10,206
Latin America	1,980	3,942	3,509
Europe	1,646	1,626	1,472
North America	1,345	1,386	2,395
Asia	1,698	1,245	1,211
CIS	717	760	542
The Middle East	533	564	539
Africa	406	468	410
Oceania	116	134	128

* The figures reflect the structural reorganization, consisting of separation of the LCD business division and incorporation of the LED division, undertaken by the company in April 2012.

GHG Emissions from Employees' Business Travel

GHG emissions generated by employees' business travel are on the rise because of the company's business expansion and efforts to develop new markets. However, Samsung Electronics has introduced initiatives designed to minimize such emissions. It has set up a companywide teleconference management system (WyzManager) in order to minimize the need for employees to travel overseas and also encourages employees to use mass transportation for their business travel so as to minimize their contributions to GHG emissions. In 2013, the company's employees in Korea contributed to generating 130,669tons of GHG emissions during their business travel.

- **Standards for Emissions Calculation :**
  (1) Corporate Value Chain (Scope 3) Accounting and Reporting Standard, World Resources Institute (WRI)
  (2) Carbon Footprint Guideline, Ministry of Environment, Korea
  (3) Calculation Tools for Employees' Business Travel

Emissions from Employees' Business Trips (Korea) (Unit : tons of CO_2)

Description	2011	2012*	2013*
Total Emissions	112,597	128,042	130,669
Air	105,520	120,621	123,137
Car	5,849	6,219	6,268
Taxi	529	513	530
Train	411	415	456
Bus	288	274	278

* The figures reflect the structural reorganization, consisting of separation of the LCD business division and incorporation of the LED division, undertaken by the company in April 2012.

GHG Emissions from Suppliers

When calculating a particular supplier's GHG emissions, Samsung Electronics considers the proportion of the supplier's transactions with Samsung Electronics in its total sales volume. Samsung Electronics manages the emissions of more than 2,000 global suppliers. At the company's request they enter their activity data into the company's GHG Management System, which calculates their emissions instantaneously. Fifty-four percent of Samsung's suppliers responded to the 2012 emissions survey (calculated by transaction volume with Samsung Electronics).
Meanwhile, Samsung Electronics supports the efforts of its suppliers to reduce their GHG emissions in a variety of ways. Since 2012, the company has participated in the Energy Reduction Coalition between large and small companies under the support of the Ministry of Trade, Industry and Energy, Korea, identifying potential energy-saving areas for its suppliers.

Suppliers' Emissions (Unit : 1,000 tons of CO_2)

Description	2010	2011	2012
Emissions	4,502	3,930	3,362
Emissions Intensity (tons of CO_2/ KRW 100 M purchase)	8.3	9.6	10

* The suppliers' GHG emissions survey for 2013 will be made available in the second half of 2014.
* The scope of the supplier survey has been changed as follows: 63% in 2010, and 65% in 2011, 54% in 2012 in terms of global purchase volume.

Operation Site Energy Management

Operation Site Energy Management System

At the company headquarters, the Environment and Safety Center issues data on the quarterly performances of each site by gathering information on energy use companywide and analyzing the causes of increases and decreases in energy use on a monthly basis. The company also promotes energy savings at operation sites through the GHG & Energy Working Group Council Meetings, during which their performances are reviewed and exemplary cases are discussed comprehensively.

Energy KPI and Accomplishments

Samsung Electronics manages energy cost ratio and energy consumption in its KPIs. As the company introduces new production facilities every year and its production output continues to grow, so does its energy consumption. The energy cost ratio is used to compare energy costs to sales volume, thus helping to identify changes in energy efficiency. Samsung Electronics has been trying to bring the ratio down by 2.5% every year since 2009 in order to meet the target of 0.77% by the end of 2013. Samsung Electronics is pleased to report that that target was exceeded in 2013.

Energy Cost Ratio (Korea) (Unit: %)

Energy Cost Ratio	2011	2012**	2013**
Goal	0.929	0.796	0.770
Performance	0.928	0.644	0.638

* Energy Cost Ratio (%) = Operation site energy costs in Korea / HQ turnover*100
** The figures reflect the structural reorganization, consisting of separation of the LCD business division and incorporation of the LED division, undertaken by the company in April 2012.

Energy Consumption (Unit: GJ/KRW 100 M)

Energy Cost Ratio	2011	2012***	2013***
Korea	59.7	41.3	36.6
Global	50.6	36.0	33.1

* KRW-based energy conversion formula: Energy consumption(1) ÷ (HQ-based turnover / price index(2))
(1) Total energy (GJ) consumption (2) The Bank Of Korea's PPI for the years (with the 2005 PPI being 1)
** KRW-based global energy conversion formula: total global energy consumption ÷ (global integrated sales / price index(2))
*** The figures reflect the structural reorganization, consisting of separation of the LCD business division and incorporation of the LED division, undertaken by the company in April 2012.

Electricity and LNG Consumption

	Description	2011	2012*	2013**
Korea	Electricity(Gwh)	12,925	8,697	9,149
	LNG(1MNm³)	197	172	186
Global	Electricity(Gwh)	15,047	10,926	11,818
	LNG(1MNm³)	237	217	233

* The figures reflect the structural reorganization, consisting of separation of the LCD business division and incorporation of the LED division, undertaken by the company in April 2012.

Acquisition of the ISO 50001 Certification

Energy Savings Activities and Accomplishments

Samsung Electronics conserved 136 thousand TOE of energy in 2013 by optimizing its manufacturing and utility facility operations, installing highly efficient facilities, and adopting waste heat recovery. As a result, the company was able to save 59 million USD on energy bills and further reduce GHG emissions by a total of 290 thousand tons. Originally Samsung had a goal of getting all manufacturing sites ISO 50001 certified (an international platform for energy management) by 2015, that goal was accomplished 2 years in advance and completed in 2013.

Renewable Energy

Renewable Energy Expansion Plans

Samsung Electronics promotes the introduction of renewable energy at its operation sites and new buildings in Korea and abroad. The company also plans to increase the purchase of green electricity and renewable energy certificates. In particular, it will mandate the introduction of renewable energy including photovoltaic and geothermal power generation for its buildings newly constructed in Korea.

Renewable Energy Status

Samsung Electronics America replaced 31.6GWh of its power consumption in the United States with renewable energy through the operation of photovoltaic power generation facilities and the purchase of green electricity and renewable energy certificates.
Meanwhile, Samsung Electronics introduced photovoltaic, geothermal and wind power generation facilities, as well as natural lighting facilities on a pilot basis for the newly constructed R5, Digital Media R&D Building, at the Suwon operation site and the DSR Building at the Hwaseong operation site. The newly introduced geothermal system is used to provide alternative energy for lobbies and meeting rooms. Samsung will continue to expand the use of renewable energy for new buildings and operation sites in the future.

Green Building

ENERGY STAR Green Building Certification

In January 2014, Samsung Electronics' North American headquarters office in New Jersey earned the ENERGY STAR green building certification. All the lighting fixtures in the building are installed with motion sensors that automatically turn lights off when spaces are unoccupied, thereby saving energy. In addition, the rooftop of the building is coated with special cover to block U rays, infrared rays and UV rays, saving air-conditioning cost in the summer and preserving heat in the winter. The lobby windows are also attached with special film to save energy and air-conditioning/heating bills.

LEED Gold Certification

| LEED Certified SRA building |

This year, construction is under way on two major Samsung facilities. Samsung Research America (SRA) is building a new R&D center in Mountain View, California. Expected occupancy is December 2014 in the buildings being designed in accordance with LEED Gold and LEED Platinum certification standards. LEED, Leadership in Energy & Environmental Design, is a green building certification program. "Our new state-of-the-art R&D center will provide an outstanding environment to support our plans for strategic growth and attracting the very best employees." said Daniel Eum, president of SRA. "This expansion, in addition to Samsung Semiconductor Inc.'s new San Jose campus, builds upon Samsung's 35-year history in the Bay Area and reinforces our commitment to the valley." Samsung Semiconductor, Inc. is also building a state-of-the art energy-efficient campus in San Jose, California.

Eco-Products

Eco-Products Goals and Accomplishments

Goals and Accomplishments

In 2008, Samsung Electronics developed a Green Management Plan 2013 with goals that ended this year. The Green Management Plan relies on an internal rating system for eco-product development (details in Eco-Design and Eco-Product Rating Process section). The company understands the life cycle impacts of its products, and to reduce those impacts, Samsung looked to drive results in two area Which are increase the number of "Eco-Products" developed and reduce the power consumed by all of the products in Samsung's portfolio. As a result of these priorities, Samsung Electronics increased the number of Eco-Products produced by 100% and improved the overall energy efficiency of Samsung products by 42% by the end of 2013. This year, Samsung Electronics established a Green Management Plan 2020 to with goals to further develop Eco-Products and enhances product energy efficiency an additional 8% getting overall energy efficiency improvements to 50% over a 2008 baseline.

Eco-Product Ratio (Unit : %)

KPI	Description	2009	2010	2011	2012	2013
Good Eco-Product Ratio	Goal*	60	90	96	97	100
	Performance*	69	91	97	99	100
Good Eco-Device Ratio	Goal*	-	70	80	85	100
	Performance*	-	72	85	88	100

* Eco-Product Ratio refers to the number of products classified as "Eco-Products" developed in eight key products categories (TVs, mobile phones, refrigerators, washing machines, air conditioners, monitors, notebook PCs, and printers) over a 2008 baseline.

Energy Efficiency Ratio (Unit : % Increase)

KPI	Description	2009	2010	2011	2012	2013
Energy Efficiency Improvement Ratio*	Goal	8	16	24	32	40
	Performance	8	16	26	31	42

* Energy Efficiency Improvement Ratio indicates the improvement rate of the annual average power consumption of eight key product categories (TVs, mobile phones, refrigerators, washing machines, air conditioners, monitors, notebook PCs, and printers) over a 2008 baseline.

Environmental Responsibility throughout the Product Life Cycle

Samsung Electronics has adopted the principle of 'Environmental Responsibility throughout the Product Life Cycle' to minimize environmental impact including the purchase of raw materials, research & development, production, distribution, product-use and end-of-life disposal.
The company analyzes environmental impacts (such as energy consumption and hazardous substances) at each stage of the product life cycle in order to ensure that products are complying with environmental regulations in Korea and abroad. It has also acquired diverse eco-friendly product certifications such as carbon labeling and eco-labeling.

Environmental Responsibility throughout the Product Life Cycle

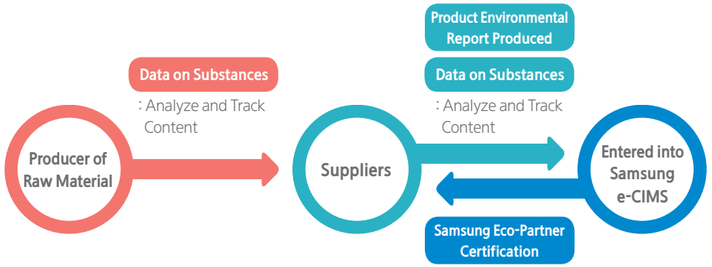
- Procurement: Eco-Partner certification system (management of hazardous materials in the supply chain)
- Development · Production: Eco-Design process; Eco-rating system; Clean production processes
- Distribution: Green logistics; Weight reduction in packaging materials
- Use: Improved product energy-efficiency; Green marketing
- Disposal: Waste collection and recycling

Procurement

Supply Chain Chemical Management

In Samsung Electronics has implemented an Eco-Partner Certification System in order to systematically verify suppliers' ability to control of hazardous substances in parts and materials. This certification system also allows Samsung to evaluate suppliers' for environmental quality management systems throughout their production processes. Samsung requires that suppliers earn this proprietary supplier certification to ensure that they responsibly manage the use of hazardous substances and have effective environmental quality management systems in place. Certified suppliers can renew their certification through Samsung's on-site evaluations or their own in-house evaluation procedure depending on the degree of risk involved in the parts and materials to be supplied to Samsung Electronics. In 2009, to ensure the Eco-Partner certification program ran effectively, Samsung Electronics established the Environmental-Chemicals Integrated Management System (e-CIMS) to track and controls hazardous substances in parts and materials in its upstream supply chain. The company also has a Hazardous Substance Management Procedure to ensure that Samsung carefully handles and tracks the use of hazardous substances in parts sourced to Samsung.

Eco-Partner Certification Process

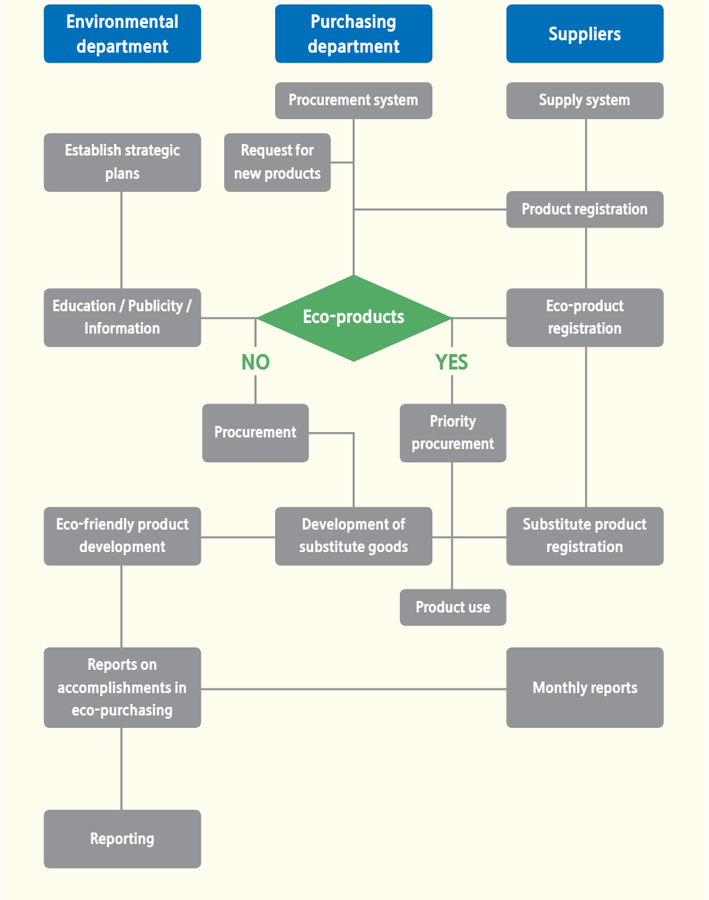


Green Procurement

Samsung strives to be a sustainability leader in electronics and understands the impacts a multinational business can have on societies and the environment around the globe. Samsung makes commitments to environmentally-friendly production through product stewardship and by incentivizing consumers to purchase sustainably. Samsung was one of the first companies to sign a Voluntary Agreement on Green Purchasing with the Korean Ministry of the Environment (MOE) in 2005 to demonstrate this commitment. In an effort to promote sustainable purchasing, in 2007, Samsung Electronics established guidelines designed to give preference to products that have been designed with sustainable parts and materials. That same year, the company prepared an Environmental Management Manual and Green Purchasing Guidelines. These policies encourage the purchase of environmentally-friendly office supplies and consumables and employee education on the availability of environmentally friendly options when purchasing products at home.

| Green Procurement Vision |

Green Procurement Process



Green Procurement in Korea (Unit: million USD)

Description	2011		2012		2013	
	No. of Items	Amount	No. of Items	Amount	No. of Items	Amount
Parts with Reduced Hazardous Substances	Many	67,916	Many	70,227	Many	70,232
Green Products (Satisfying Environmental certification, GR Mark, etc)	445	35	362	50	877	60
Total	Many	67,951	Many	70,277	Many	70,292

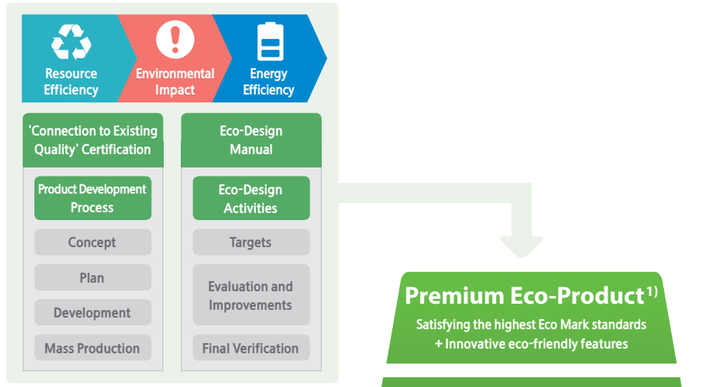
* GR Mark(Good Recycle Mark) : Eco mark run by Korean Agency for Technology and Standard

Development and Production

Eco-Design Process and Eco-Product Rating System

In 2004, Samsung Electronics adopted the 'Eco-Design Evaluation Process' and mandated the environmental impact assessment (EIA) for new products under development. In 2008, it established the Eco-Design System (EDS), and has since implemented a 'Eco-Product Rating' system to rank the environmental impact of individual products and give preference to 'Premium Eco-Product' models. Under this system, the company evaluates the environmentally-friendliness of all products under development and classifies them into three groups: Premium Eco, Good Eco, and Eco. In 2014, Samsung Electronics will continue to expand the proportion of Premium Eco-Products, in its product portfolio by developing Eco-Products based on more stringent standards through the introduction of additional evaluation categories and rating standards. One of the ways that Samsung measures the number of Eco-Products is with the internationally recognized environmental standards and labels such as EPEAT and UL.

Eco-Design and Eco-Product Rating Process



| Eco-Design Process |

| Eco-Product Rating System |

1) Premium Eco products which satisfy the highest global Eco Mark standards such as UL, EPEAT, AHAM and moreover improved with superior environmental features such as US EPA Energy Star Most Efficient or EU energy label A+++.
2) Good Eco products which satisfy the highest global eco mark standards such as UL, EPEAT, AHAM.
3) Eco products which satisfy environmental regulations.

Chemicals Management in Products

Samsung Electronics strictly controls the use of chemicals in its products. The company manages both legally restricted substances and voluntarily restricted substances through the Standards for Control of Substances concerning Product Environment (OQA-2049). In order to prevent 'controlled substances' from entering products, the company strictly tests and controls all the materials and parts delivered to its operation sites. In addition to mandatory restrictions based on RoHS and REACH, the company voluntarily controls chemicals that are not yet regulated, but which may cause harm the environment or consumers. These substances include polyvinyl chloride (PVC), brominated flame retardants (BFRs), and phthalates. Samsung Electronics phased-out PVC and BFRs in all mobile phones and MP3 players, beginning in April 2010. The company also eliminated PVC and BFRs in its notebook PCs by January 2011. That same year, Samsung also began to include PVC-free materials in TVs, monitors, and home theater products.

Eco-Friendly Materials

Samsung Electronics employees work diligently to find innovative design solutions to the world's most pressing sustainability problems. One great example of this is in the invention and production of various eco-friendly materials in packaging. In order to minimize the environmental impact during the product development phase, Samsung Electronics employees the use of eco-friendly materials. Samsung invented a bio-plastic, uses soy-based ink, and eco-friendly enzyme additives. The use of these eco-friendly materials contribute to reducing pollutants including total volatile organic compounds (TVOCs) and environmental hormones, as well as conserving resources.

Bio-plastics

Samsung Electronics uses bio-plastics in its mobile phones, refrigerators, and TV accessories. The company launched an eco-friendly mobile phone 'Reclaim' in the United States in 2009. The bio-plastic material extracted from corn made up 40% of the phone's casing. It was developed to withstand freezing conditions and was used in refrigerator interiors. Samsung Electronics began to use bio-plastics for its refrigerators released in November 2013. Starting in February 2014, the company began to integrate bio-plastics, which contains raw sugar cane materials, into packaging materials for its TV accessories including 3D glasses, remote controls and manuals. In recognition of its efforts to develop bio-based materials, Samsung Electronics was awarded the "Bio-based" certification by the Korean Bio Material Packaging Association in December 2013. It also received the "OK Bio-based" certification, an internationally-recognized eco-certification, by Vincotte, a Belgian accredited inspection and certification organization, in January 2014.

| Reclaim |

TV Accessories Made from Bioplastics

The Packaging Box of Galaxy S4 Printed with Soy-based Ink

Solvent-Free Soy-Based Ink

Samsung Electronics' product manuals and packaging boxes are printed with soy-based ink that does not contain any organic solvent. Soy-based ink is a solvent-free eco-friendly ink that does not emit hazardous substances such as TVOCs, thus contributing to reducing air pollution. Samsung Electronics began to employ soy-based ink for manuals of its mobile phones, refrigerators and air conditioners in May 2013 and plans to expand the scope of its application.

The Galaxy Note 2 Manual Made from Paper Using Enzyme Additives

Eco-Friendly Enzyme Additives

In 2013, Samsung Electronics discovered a way to reduce use of paper in packaging materials. To reduce paper content, Samsung developed additives to maintain the paper quality, while reducing the amount of paper pulp required. These additives use special enzymes to reinforce the chemical bonding within the pulp.

Recycled Plastic

Over the course of the last few years, Samsung has made reducing the use of virgin plastics a priority. The company understands the impact that plastic can have on the environment at the end-of-life and wants to insure that waste is minimized and that plastic is reused wherever possible. There have been a few notable designs where Samsung has learned a lot about what it takes to increase the use of recycled plastic in its mobile phones and accessories. In 2013, Samsung Electronics increased the amount of total recycled plastic in its product portfolio to 3.4% and plans to increase this to 5% by 2015. Recycled plastic is used primarily for interior parts of home appliances including refrigerators, washing machines, and air conditioners. It is also used in mobile phones, monitors, and some exterior parts.

| Replenish and Merilyn |

| Galaxy Note 3 Charger |

Recycled Plastic in Samsung's Global Product Portfolio

Description	2011	2012	2013
Recycled plastic (tons)	12,519	15,467	19,403
Proportion*(%)	2.26	3.12	3.36

* 'Proportion' is the ratio of recycled plastic over the total quantity of plastic used.

Distribution

Eco-Friendly Packaging Materials

Samsung Electronics is committed not only to the development of environmentally-friendly products, but also eco-friendly packaging. For all of these packaging innovations, Samsung Electronics has won the World Star Award from the World Packaging Organization and earned a Green Packaging (GP) Mark from the Korean Ministry of Environment.

Recycled Packaging Materials

Since June 2012, Samsung Electronics has replaced disposable refrigerator packaging materials with packaging materials made of non-toxic expanded polypropylene (EPP) which is harder than paper packaging. So it can be used more than 40 times by collecting and washing. Currently this solution is being trialed in Korea with the intent of implementing it in additional markets.
It is estimated that the reuse of refrigerator packaging will reduce CO_2 emissions by 7,000 tons/year and will cut back on the use of pulp, so much so that would be equivalent to planting 130,000 trees. As the packaging materials can be used more than 40 times, it can also contribute to resource conservation. In addition, the company has reduced its TVOC use by 99.7% by saving tape and Styrofoam.

| Recycled Packaging Materials for Refrigerators |

Shrinking Package

The company significantly reduced energy-used and GHG emissions from transportation through one small change in the way products are packaged. Samsung uses shrink-wrap packaging and recycled packaging materials, both of which improve recyclability and reduce weight during shipment.
Samsung Electronics uses shrink packaging for its refrigerators, washing machines, microwave ovens, and dishwashers. Shrink packaging is a technique that compresses products and packaging materials with heat. This technique reduces the weight of packages by an average of 44% compared to paperboard packaging, thereby reducing transportation costs and cutting down GHG emissions from transportation, too. Most notably, shrink packaging for drum washing machines is an eco-friendly packaging method because it reduces the use of pulp by more than 70% compared to paperboard packaging and the shrink-wrap can be recycled. Furthermore, air pollutants like formaldehyde and TVOCs can be reduced an estimated 77% and 21%, respectively.
In recognition of its excellence in promoting eco-friendliness, Samsung Electronics' shrink packaging system was certified for Green Technology by the Korean Ministry of Environment. The company was also awarded the 2010 Asia Star Award in "Eco-Packaging" category for its shrink packaging technology applied for drum washing machines.

| Shrink Packaging for Drum Washing Machines |

Use

Product Energy Efficiency Goals

Samsung Electronics closely monitors global trends in energy regulations on product power consumption, and consistently exceeds energy efficiency required by regulations. The company has outlined a 2020 goal of improving energy efficiency by 50% (over a 2008 baseline) across the company's entire product portfolio. To do this, the Samsung will need to continuously improve product energy efficiency and has prioritized developing high efficiency compressor and motor technologies, low-power consumption technologies, and energy efficiency innovations for chargers.

Accomplishments in Product Energy Efficiency Improvement

Samsung Electronics reduced the annual power consumption of its eight major products by 42% between 2008 and 2013. This had the impact of reducing GHG emissions by 88.6 million tons over that 5 year period. In 2013, the company launched a wide range of highly energy-efficient products, including smart TVs with lower power consumption by 61% compared to the existing TVs, green memory solutions such as DDR3 and SSD, the Exynos 5 Octa mobile application processor, smart air conditioners, and LED lamps.

| Smart TV, F558000 |

Smart TVs

Samsung Electronics' smart TVs save energy consumption by 61% by reducing the number of LED lamps and adopting light sensors. In addition, the company applies the Evolution Kit that can upgrade the TV's multimedia contents, picture quality and smart functions upon its installation on the existing TVs, thereby extending product life cycle.

| DDR4 & PCIe SSD |

Green Memory

Samsung Electronics has developed its fifth generation green memory solutions mounted with DDR4 and PCIe SSD, thereby contributing to improving energy efficiency of related IT products. If all server systems around the globe adopted the green memory solutions, the total system performance would be improved by two to ten folds and an anticipated power savings of 45 terawatts per hour could be achieved, compared to the existing servers mounted with DDR3 and HDD. This is equivalent to planting 800 million 10-year-old trees.

| Exynos 5 Octa |

Exynos 5 Octa

Samsung Electronics' Exynos 5 Octa, a high-performance mobile application processor with enhanced graphic processing capabilities, can save energy generated when using Galaxy S4. The Exynos 5 Octa offers up to 70% energy saving through core role division in which high-performance tasks can be carried out with high-performance cores, while simple tasks can be handled with low-performance cores.

| Smart Air Conditioner AF18FVWD1WK |

Smart Air Conditioners

Samsung smart air conditioners maximize cooling efficiency by employing smart sensors that automatically manage the power through the detection of people's location and activity volumes, as well as heat exchangers applied with micro tube technology. In particular, the smart inverter, which automatically adjusts cooling intensity depending on inside and outside temperatures, can save energy by 58% compared to general compressors.

| LED Lamps |

LED Lamps

LED lamps with low power consumption can save energy and electricity bills by up to 80% compared to incandescent lamps. They last 25 times longer than incandescent lamps, eliminating inconveniences of frequent replacements. In addition, LED lamps offer healthy lighting without emitting harmful UV or IR radiation.

Disposal

Take Back and Recycling

Inspired by the principle of 'Individual Producer Responsibility', Samsung Electronics does its utmost to maximize collection and recycling of waste products. Globally, the company is running e-waste take back programs in more than 60 countries including the United States, Canada, Europe, India and Australia.

Major Activities

Korea

Samsung Electronics has set up an 'e-Waste recycling system' for the first time in the electronics industry in Korea. Starting with the Asan Recycling Center established in 1998, the company now runs a total of eight recycling centers across the nation. 1,500 sales centers and 20 regional logistics centers in Korea serve as collection agencies to transport end-of-life electronics to recycling centers.

North America

Launched in 2008, SRD (Samsung Recycling Direct), a voluntary recycling program in the United States, is running about 941 take back centers in all 50 US states. Over the border in Canada, Samsung Electronics is operating a total of 1,476 collection centers. In April 2010, Samsung Electronics joined BAN (Basel Action Network), a non-profit toxic watchdog organization of the United States, as an E-Steward Enterprise for the first time in the Korean industry. BAN promotes the E-Stewards Certification program to ensure that exports of hazardous electronics waste to developing countries are eliminated. Samsung Electronics fully supports a ban on exporting hazardous waste to the developing world, and sending e-Waste to landfill. Since August 2012, Samsung Electronics has been participating in the Environmental Protection Agency' s SMM (Sustainable Materials Management) Electronics Challenge at the Gold Level, the highest in the tiered structure, calling for more effective use of resources and the safe disposal of electronic waste.

Europe

In the European Union, Samsung Electronics has taken over responsibility for the financing of recycling activities since the entry in force of the Waste Electrical and Electronic Equipment (WEEE) Directive in 2005, giving every citizen the opportunity to discard their old equipment conveniently and free of charge at a designated collection point. Samsung is a member of a leading recycling organization in every member state where it has an established legal presence. Recycling service providers are being selected and assessed on an annual basis with regards to their compliance with applicable legislation, Samsung's internal recycling guidelines and operational performance. Furthermore, Samsung has been a key stakeholder in the development of the first pan-European recycling standards (WEEELABEX) laying down normative rules for all steps of the recycling value chain, including: collection, sorting, storage, transportation, preparation for re-use and treatment of all WEEE categories. The project has been managed by WEEE FORUM and co-financed by LIFE funds of the European Union. Samsung is actively cooperating and encouraging its recycling service providers to implement the requirements of these important standards.

India

In India, the company began a voluntary recycling program in 2010, and now runs 235 collection centers. For large household appliances, consumers can request take back simply by calling a Samsung call center. Recycling information is continuously supplied to the public on the company website to help consumers easily dispose of electronic waste.

Australia

In Australia, Samsung launched recycling program for TV, PC and printer in 2012 and running about 140 take back centers in 8 states. The detailed information on take back and recycling is provided by various channel likes website and manual.

Global Take back & Recycling System

EUROPE

EUROPE
29 countries take-back & recycle

AFRICA

SOUTH AFRICA
service centers offer collection boxes

ASIA

Korea
take-back network among distribution centers and agents, Asan Recycling Center open since 1998

India
collection programs available since December 2009

China
collection available from 2012, recycling to be introduced in the near future

Japan
collection services, participation in recycling consortium

Taiwan
offers national recycling system

OCEANIA

Australia
collects televisions, computers, and printers for recycling, offers cell phone collection programs

AMERICA

Canada
16 points of collection, operates voluntary take back program

U.S.
operate voluntary take back program across 50 states

Colombia
collection boxes at service centers

Brazil
collection boxes at service centers

Accomplishments in Global Take Back & Recycling

In 2013, Samsung Electronics collected and recycled about 355,000 tons of electronic waste.

Global Take Back & Recycling Quantity (Unit : tons)

Region	2011	2012	2013
Asia	54,233	53,089	67,100
Europe	245,838	230,492	241,260
North America	39,347	41,964	46,239
Total	339,418	325,545	354,599

Product & Packaging Recycling Statistics (Korea) (Unit : tons)

Category	2011	2012	2013
Products	51,940	49,677	58,447
Packaging	5,045	4,993	4,984

Recycling Statistics by Product (Korea) (Unit : tons)

Description	Refrigerators	Washing Machines	Displays	Others	Total
Recycling Quantity	25,510	10,790	16,219	5,928	58,447

Reutillization of Resources* (Korea) (Unit : tons)

Recycled Resources	Scrap	Non-ferrous	Synthetic resins	Glass	Others	Waste	Total
Quantity	19,005	6,889	12,850	9,677	4,162	5,864	58,447

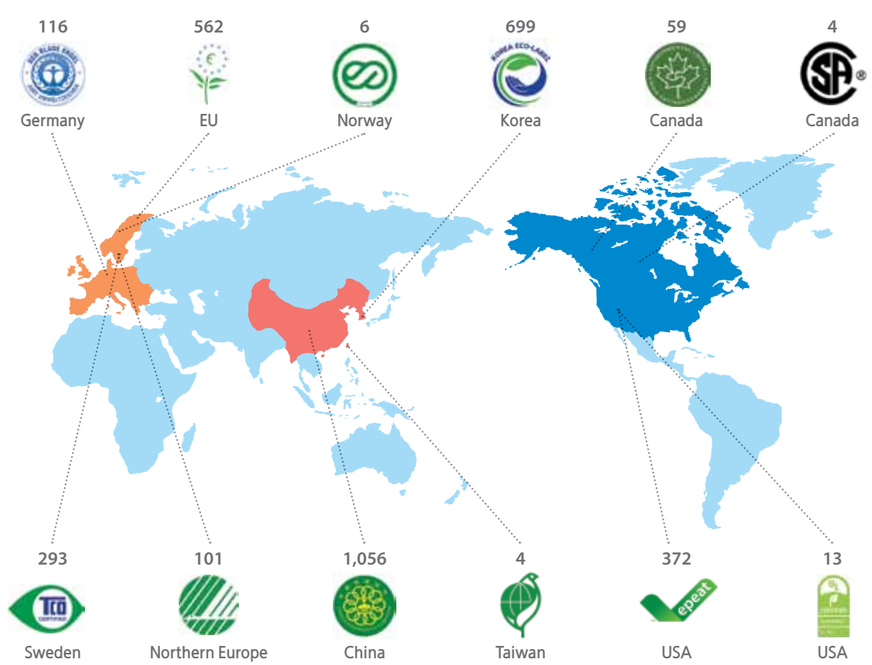
* Recycled Resources figures are estimates and accurate figures will be confirmed in the third quarter of 2014.

Environmental Certification

Global Environmental Certification

In recognition of its products' eco-friendliness, Samsung Electronics has received environmental certification marks not only from nine countries including Korea, the United States and countries in Europe, but also from three certification organizations including UL of the United States. By the end of 2013, the company had received environmental certification marks for a total of 3,285 models, the highest number for any company in the global electronics industry.

Global Environmental Certification Marks Received (as of the end of 2013)



Environmental certification marks for a total of 3,285 models

Global Carbon Footprint Labeling

Samsung Electronics tracks down on the carbon footprint embodied in a product by each phase of its life cycle by converting GHG emissions generated during a product's entire life cycle involving procurement, development, production, distribution, use and disposal into the amount of CO_2. The company has found out that carbon emissions from product use take up a bigger proportion than any other in the entire life cycle of an electronic product and thus is striving to reduce power consumption of its products. In addition, Samsung Electronics is acquiring carbon labeling certifications from Korea, Japan and the United Kingdom to provide eco-friendly information of its products to consumers through the carbon footprint and encourage them to purchase Eco-Products.

Global Environmental Certification Marks Received

Carbon Trust
(7 models)

Carbon Labeling
(Carbon Emissions Certification + Low Carbon Product Certification)
(239 models)

Carbon Footprint
(2 models)

Samsung Air Purifiers to Win Low Carbon Product Certification

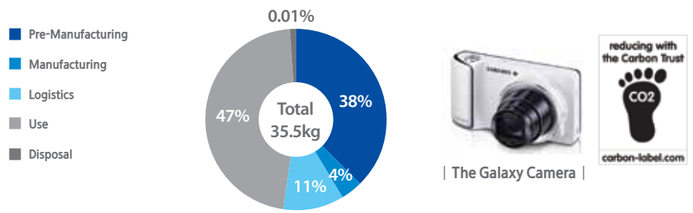
Korea's Low Carbon Product Certification

The Low Carbon Product Certification granted by the Korea Environmental Industry and Technology Institute under the Ministry of Environment is issued to products that have reduced their carbon emissions compared to the previous product versions among carbon emission certified products. Samsung Electronics has acquired the Low Carbon Product Certification for 40 models of its eight products including TVs, note PCs and air conditioners. In February 2014, the company's two air purifier models received the Low Carbon Product Certification for the first time in the industry. The air purifiers reduced carbon emissions by up to 32%, compared to low carbon product certification standards by enhancing energy efficiency through the optimization of the air passage structure.

The U.K.'s Carbon Trust

The Carbon Trust is a non-profit organization established by the U.K. government as part of its efforts to respond to climate change. It is one of the world's most authoritative and credible institutions in the fields of carbon reduction programs and certifications.
In 2012, Samsung Electronics received carbon footprint certification for its Galaxy S2 and Galaxy Note 2 from the Carbon Trust for the first time in the mobile industry. As of now, the company's seven products including the Galaxy Camera and Galaxy S4 have been certified by the Carbon Trust.

Galaxy Camera Carbon Emissions certified by The Carbon Trust (on the basis of British Standards)

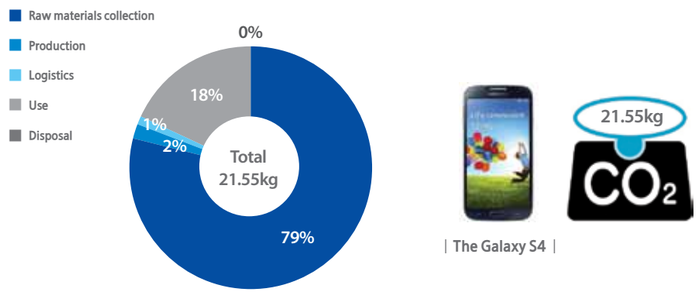


| The Galaxy Camera |

Japan's Carbon Footprint Label

The Carbon Footprint Label organized by the Japan Environmental Management Association for Industry is a system aimed to promote the industry's carbon reduction efforts by estimating carbon emissions on products and services. In 2012, Samsung Electronics' Galaxy Note 2 was registered as the industry's first eco-friendly mobile device certified by Japan.
The company's Galaxy S4 released in 2013 also received Japan's Carbon Footprint label in recognition of its optimized use of resources and its charger with markedly reduced standby power.

Galaxy S4 Carbon Emissions certified by
JEMAI(Japan Environmental Management Association for Industry)



| The Galaxy S4 |

Green Certification

Green Certification is awarded by KIAT (Korea Institute for Advancement of Technology) under the auspices of the MOTIE to eco-technologies that have contributed to GHG emissions reduction, enhanced energy efficiency and resource conservation. By the end of 2013, Samsung Electronics had received 31 green technology certificates for improvements in product energy efficiency, resource conservation and environmental protection.

| Smart TV, 55F8000 |

Samsung's Energy Efficient TVs to Win Green Technology Certification

In August 2013, Samsung Electronics won 'Green Technology Certification' with its five power-saving technologies. The technologies range from standby power 0.00W, Low Power Digital TV SOC (System On Chip) design, LED Motion Lighting, PDP Motion Lighting to New Formation Technology of PDP.
The standby power 0.00W technology reduces wasted energy by 1/100 under the European Commission standard of 0.5W when TVs are not in use. In addition, the Low Power Digital TV SOC technology with the improvement of chips embedded in TVs, as well as the Motion Lighting technologies, is recognized for excellence in saving electricity consumption.

2013 Eco-Product Highlights

As well as releasing a great variety of eco-friendly products that reduce resource and energy consumption, Samsung Electronics minimizes the use of hazardous substances and features specialized eco-friendly technologies.
In 2013, the company launched the following eco-friendly products:

Product	Model	Eco-friendly Characteristics	Product	Model	Eco-friendly Characteristics
	LED TV (55F8000)	• 61% reduction in annual power consumption (※Previous model: 55C8000) • US ENERGY STAR certification • US UL environmental product certification • The Evolution Kit		Smartphone (Galaxy Note 3)	• 16% reduction in annual power consumption (※Previous model: Galaxy Note 2) • Low power charger • Manuals and packaging materials made from 100% recycled paper • 20% of the charger composed of PCM * PCM: Post Consumer Material
	Monitor (S27C450B)	• 49% reduction in annual power consumption (※Previous model: S27A650D) • US EPEAT Gold certification • US ENERGY STAR 6.0 certification • SEAD Global Efficiency Award		Note PC (NP940X3G)	• 20% reduction in annual power consumption (※Previous model: NP900X3C) • Eco-friendly aluminum material • Ultra-light & ultra-thin • TCO 3.0 certification
	Refrigerator (RS843GFPG7H)	• 14% reduction in annual power consumption (※Previous model: RS84PGRPC1*) • Adoption of an eco-friendly refrigerant R600a • Recycled packaging materials • Eco-Friendly Packaging Material Mark certification		Printer (SL-M2875FW)	• 61% reduction in annual power consumption (※Previous model: 55C8000) • One-touch Eco Button • Vegetable-based ink used for packaging materials • Germany's Blue Angel certification
	Washing Machine (WD19F8K7ABG1)	• 7% reduction in annual power consumption (※Previous model: WW- PC197CW) • Annual reduction in water consumption by 10,920ℓ • 'No Water' Drying Technology • Green Technology certification by the Ministry of Environment		Tablet PC (XE300TZC)	• Low power memory • Packaging materials made from 100% recycled paper • TCO 3.0 certification • Korea's Eco-Label certification
	Air Conditioner (AF18FVWD1WK)	• 62% reduction in annual power consumption (※Previous model: AF-CC183B) • The highest energy efficiency (Korea's 'Energy Frontier' certification) • Adoption of an eco-friendly refrigerant R410a		Vacuum Cleaner (VC33F70LHAR)	• Improved resin recyclability • No use of air spray paint (No CO_2 emissions)

Green Operation Sites

Operation-Site Environmental Management System

Policies and Strategies

Samsung Electronics operates its environmental management system to preserve the global environment, and is involved in related activities such as reducing GHG emissions, water resource consumption, and the amount of waste generated, as well as increasing resource recycling.
The company is establishing response measures for various environmental risks while continuing such efforts to secure sustainability. Based on these activities, harmful effects are minimized and environmental incidents are prevented at the source.

Targets and Assessment of Achievements

The EHS Strategy Council is convened on a regular basis to devise policies aimed at preventing EHS accidents and to assess environment and safety risks. The council reviews and analyzes global environmental guidelines and national policies, and makes decisions on the relevant corporate policies. It also analyzes the green management environmental indices of the company's global operation sites and shares the implementation results and success stories to improve the environmental safety level continuously. Samsung Electronics has selected the following four key green management environmental indices and focuses on the achievements.

First, the rate of management system certification acquisition indicates whether the detailed setting of targets and activity, and the review process of the company's operation sites are systematically performed. New operation sites aim to acquire the certificate within one year of their establishment by developing the environmental safety management system.

Second, the greenhouse gas index* is a representative index of response to global climate change. Samsung Electronics manages the scopes 1-3.

Third, the water resource use index indicates the results of efforts to save water resources at operation sites. The index is designed to achieve water source stability.

Fourth, the waste generation quantity index shows the circulation efficiency of the resources used in a given operation site, with the ultimate aim of recycling all waste materials generated by the business place.

Target and Performance

Category	Rate of management system certification acquisition**			Water resource	Waste	
	ISO 14001	OHSAS 18001	ISO 50001	Water intensity (Water withdrawal / Sales)	Rate of recycling	Waste intensity (Waste quantity/ Sales)
Level of achievement in 2013	100%	100%	100%	35 tons /KRW 100 million	92%	0.33 ton /KRW 100 million
2015 target	100%	100%	100%	50 tons /KRW 100 million	95%	0.38 ton /KRW 100 million 2009 level
Implementation strategies	• Standardizing management system operation • Certificate acquisition for a new entity within one year			• Securing stable water resources • Increasing water reuse	• Developing the resource cycling type system • Increasing the number of recycling items • Suppressing waste generation	

* For GHG emissions targets, refer to the Climate Change Mitigation section.
** Based on 34 manufacturing sites (6 in Korea, 28 in foreign countries).

Internal & External Communication

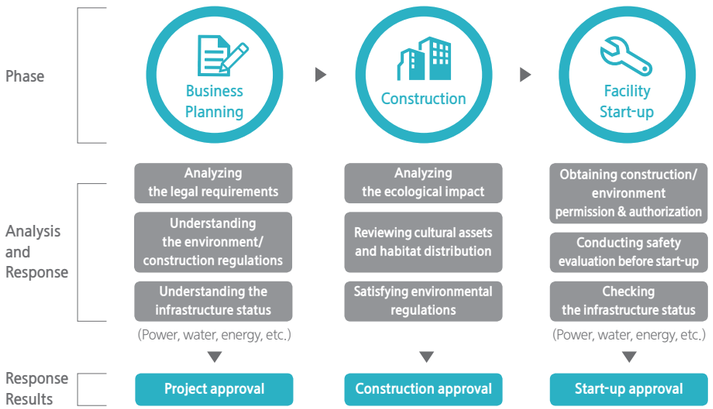
Samsung Electronics publishes an annual sustainability report and discloses its environmental safety management information to its major stakeholders, including employees and local communities. In addition, the company operates an environmental safety committee to resolve employee issues and handle local community requirements. Company representatives and environmental safety expert are members of the committee. Committee decisions and implementation results are disclosed transparently, using various communication channels including local community briefing sessions and websites.

Environment and Safety Risk Analysis

In order to ensure environmental conservation, Samsung Electronics continuously strives to reduce pollutant emissions and assesses their environmental impact in advance. The company also complies with the guidelines and global environmental regulations presented by international organizations such as the United Nation and private organizations. In addition, Samsung Electronics continuously follows and preemptively responds to the environmental, safety, and health regulations, which are becoming more stringent year by year. It also abides by rules and processes, thereby eliminating environment and safety risks at their source.

Risk Analysis and Response Process

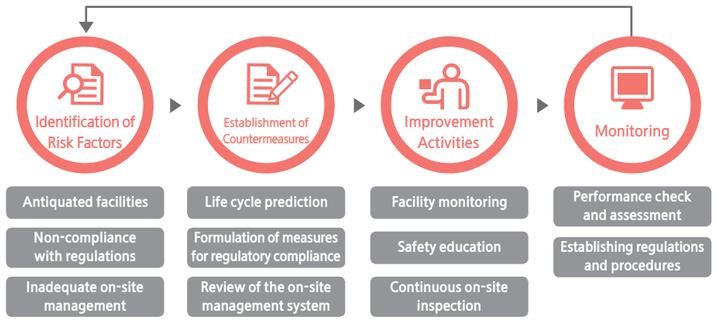
Environmental Safety Risk analysis and Response for Plant Construction and Expansion



Environmental Safety Accident Prevention System

Samsung Electronics promotes legal and regulatory compliance to prevent accidents. Based on the belief that compliance with safety regulations protects the lives of its employees, the company strives to enhance employees' compliance with safety regulations and develop a culture of safety. Samsung Electronic runs a life-cycle prediction system to eliminate potential risk factors that may be generated by antiquated facilities. It continues to eliminate environmental safety risks in advance by identifying potential risks, formulating improvement measures and conducting continuous monitoring.

Accident Prevention System



Environmental Safety Accident Response System

Samsung Electronics has drawn up a number of emergency scenarios to cope with potential safety accidents such as harmful chemical leaks or spills, environmental pollution, fire explosion, and natural disaster. It also verifies the effectiveness of the emergency response system by conducting regular emergency response exercises. Based on these emergency scenarios, an emergency response team is formed and additional damage is prevented by taking emergency measures. In addition, emergency evacuation drills and emergency exercises are performed regularly to ensure that employees are able to evacuate the site quickly and safely. Upon completion of the response to an incident, its cause is analyzed to prevent the recurrence of similar incidents in the future.

Accident Response Procedure

Accident Occurrence	Emergency Measures	Investigation & Cause Analysis	Counter-measures	Preventive Measures
• Information sharing • Assessment of accident type • Risk phase analysis	• Formation of risk management committee • Implementation of emergency measures • Implementation of emergency evacuation /emergency measures	• Secondary accident prevention activity • Accident investigation/ cause analysis	• Recovery measures • Goods support • Business continuity plan	• Establishment of recurrence prevention measures • Review of effectiveness of accident response system

Types of Accidents

Category	Type of Accidents
Environmental	Chemical and pollutant leaks and spills
Safety	Fires, explosions, natural disasters (heavy snow, torrential rain), terrorism
Infrastructure	Power outage, water supply disruptions, suspension of fuel supply
Health	Infectious diseases, food poisoning

ISO 140001 & OHSAS 18001 Certification

All of Samsung Electronics' manufacturing sites have acquired ISO 140001 and OHSAS 18001 certifications, international environmental safety management system standards, and maintain environmental management through follow-up and re-certification reviews. In addition, all of the company's production subsidiaries (6 sites in Korea and 28 sites across the globe) acquired the international energy management system standard ISO 50001 in 2013, thereby systematically establishing energy and GHG management systems.

Certification Status

Region	Acquisition Rate (No. of Sites Certified)		
	ISO 14001	OHSAS 18001	ISO 50001*
Korea	100% (6)	100% (6)	100% (6)
Global	100% (34)	100% (34)	100% (34)

Certification acquisition status

Area	Operation Site (Subsidiary)	ISO 14001		OSHAS 18001		ISO 50001	
		Certification Acquisition Date	Certification Agency	OSHAS 18001	Certification Agency	Certification Acquisition Date	Certification Agency
Korea (6)	Suwon	1996-10	DQS UL	2000-11	DQS UL	2012-06	DQS UL
	Gumi	1996-11	DQS UL	2001-10	DQS UL	2011-07	DQS UL
	Gwangju	1996-10	DQS UL	2002-10	DQS UL	2012-05	DQS UL
	Giheung	1996-09	BV	1999-12	BV	2011-11	BV
	Hwaseong	2001-11	BV	2001-11	BV	2011-11	BV
	Onyang	1996-09	BV	1999-12	BV	2011-11	BV
Global (28)	SAMEX	2000-12	DQS UL	2003-12	DQS UL	2013-07	DQS UL
	SAS	2001-01	PRJ	2007-10	PRJ	2013-08	DQS UL
	SEM-P	2004-11	DQS UL	2006-06	DQS UL	2013-08	DQS UL
	SEDA-P(C)	2009-11	DQS UL	2009-11	DQS UL	2013-08	DQS UL
	SEDA-P(M)	2001-02	BV	2006-03	BV	2013-08	DQS UL
	SERK	2009-04	DQS UL	2009-04	DQS UL	2013-08	DQS UL
	SEH-P	2005-05	BV	2005-11	BV	2013-08	DQS UL
	SESK	2003-09	DQS UL	2003-09	DQS UL	2013-08	DQS UL
	SEPM	2010-12	DQS UL	2010-12	DQS UL	2012-11	DQS UL
	SEIN-P	2003-04	SUCOFINDO	2003-10	SUCOFINDO	2012-10	DQS UL
	SAVINA	2001-12	DQS UL	2002-12	DQS UL	2013-08	DQS UL
	SDMA	1999-08	DNV	2002-08	DNV	2013-08	DQS UL
	SEV	2009-09	BSI	2009-09	BSI	2013-10	BSI
	TSE	2001-12	DQS UL	2003-11	DQS UL	2012-11	DQS UL
	SEMA	2005-12	DNV	2005-12	DNV	2013-08	DQS UL
	SIEL-P(C)	2008-09	BV	2008-09	BV	2013-08	DQS UL
	SIEL-P(N)	2000-06	AFNOR	2003-08	AFNOR	2013-08	DQS UL
	TSEC	2000-02	BV	2004-10	BV	2013-08	DQS UL
	TSOE	2008-02	CQC	2010-02	CQC	2013-08	DQS UL
	TSLED	2010-04	BSI	2010-04	BSI	2013-08	DQS UL
	SEHZ	2005-05	CQC	2006-03	CQC	2013-07	DQS UL
	TSTC	2005-05	DQS UL	2005-05	DQS UL	2013-07	DQS UL
	SSET	2005-04	SSCC	2005-04	SSCC	2013-08	DQS UL
	SSDP	2004-09	DQS UL	2004-11	DQS UL	2013-08	DQS UL
	SESC	2004-02	CQC	2004-02	CQC	2013-08	DQS UL
	SESS	2004-05	SGS	2004-05	SGS	2013-08	DQS UL
	SSEC	2003-11	CQC	2005-06	CQC	2013-08	DQS UL
	SEHF	2012-01	SSCC	2012-01	SSCC	2013-08	DQS UL

* Samsung Electronics China's ISO50001 certification refers to the Declaration of Conformity (DoC).

Operation-Site Environmental Management Status

Samsung Electronics continuously carries out activities and makes investments to secure water resources, conserve the ecosystem, prevent depletion of natural resources and expand resource recycling. The company has also established pollutant and chemicals management systems to meet and exceed legal standards.

Water Resource Management

Water shortages have emerged as a prominent global issue across the world. Clearly recognizing its responsibility as one of the world's leading IT companies, Samsung Electronics sets company-wide water resource management policies and reduction targets, and prepares and implements response strategies to resolve the issue of water resource depletion and minimize serious management risks.

Water Resource Policies

Recognizing the growing importance of global water resource issues, Samsung Electronics has established water resource management policies with a focus on minimization of management risks and enhanced stakeholder communication.

Water Resource Policies

Basic Philosophy

"Samsung Electronics recognizes the importance of water resources for the sustainability of society and business management, and contributes to its protection as a responsible corporate citizen of global community."

Code of Conduct

1. **Strive to minimize water risk impact by our business activities.**
   Analyze the impacts of our products, production activities and services on water resources and minimize risks by identifying and implementing new technologies.
2. **Instill awareness of the importance of water resources as a part of our corporate culture.**
   Integrate the importance of water resource protection and sustainability management into the corporate culture and ensure responsible water resource management by employees with the highest consideration for the impact on local communities and the environment.
3. **Proactively follow public water policies.**
   Proactively contribute to the establishment and implementation of water resource management policies by international institutes, the government and local authorities in line with relevant guidelines.
4. **Disclose company policies and activities on water resource management.**
   Disclose the company's policies and activities related to water resource use to stakeholders including local communities in a transparent manner.

Water Resource Risks

Using the water resource management tools distributed by the Food and Agriculture Organization (FAO) and the World Business Council for Sustainable Development (WBCSD), Samsung Electronics has identified water resource risks in its 34 manufacturing plants. Based on the CDP (Carbon Disclosure Project) Water Disclosure guidelines, the company has analyzed water resource risks associated with its business sites located in water-stressed countries and has developed differentiated emergency countermeasures by risks.

Water Withdrawals by Region (Six operation sites in Korea, 28 operation sites globally)

Region	No. of Subsidiaries	Withdrawal (1,000 tons)	Discharge (1,000 tons)	Water-stressed Countries (No. of Operation Sites)
Asia	25	61,641	48,605	Korea(6), India(2)
Latin America	5	6,691	5,358	-
Europe	4	337	294	Poland(1)

※ FAO's water resource management tools have been employed.

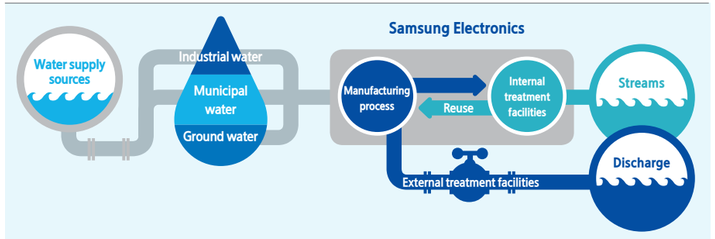
Risk Management

	Description	Risk Countermeasures
Physical Risks	Water quality degradation	• Assurance of water quality throughout water pre-treatment process
	Floods	• Creation of wetlands and establishment of embankments • Subscription to natural-disaster insurance
	Water supply disruptions	• Building dual main water supply lines and sufficient water storage facilities to prevent disruptions of work
Regulatory Risks	Changes in regulations on water usage & disposal	• Establishment of internal regulations on discharge concentration that are stricter than legally required • Increased water recycling to reduce discharge quantity
	Efficiency standards legislation	• Evaluation of water efficiency for new facilities; investments in existing facilities for water efficiency improvements
	Uncertainty over new legislation	• Continuous monitoring of global environmental legislation trends
Reputational Risks	Lawsuits resulting from disposal of wastewater	• Continuous monitoring of discharge water • Early establishment of environmental management system (EMS) for new manufacturing facilities
	Wastewater leakage, etc.	• Operation of emergency response organizations • Enhanced internal and external communication about the company's water resources management

Water Resource Status

Water resources are supplied to Samsung Electronics on a stable basis by water providers. However, the company is striving to minimize risks associated with water resources by building dual main water supply lines and sufficient water storage facilities. Meanwhile, discharge water released from its operation sites is safely treated through internal and external treatment facilities.

Water Resource Flow (as of 2013)



(Unit : 1,000 tons)

Water Inflow			Water Discharge		Recycled water quantity
Industrial water	Municipal water	Underground water	Internal treatment facilities	External treatment facilities	
47,765	19,847	1,069	44,144	10,113	45,262

Despite steadily rising demand for water usage due to the increase in production volumes and the number of employees, Samsung Electronics achieved a two-percent reduction in water usage compared to the previous year through its water resource conservation activities. Although the ultra pure water recycling rate shows downward trends due to increasingly sophisticated semiconductor processes, the company's water recycling rate rose by 4.6% over the previous year through increase in the reuse of wastewater and sewage. Samsung Electronics will actively carry out water resource conservation activities to achieve the water-usage target of 50 tons/ KRW 100 million in terms of water consumption intensity relative to sales by 2015.

Water Withdrawals

Description		Water Withdrawal by Sources (1,000 tons)				Water Use Per Unit Production (ton/KRW 100 M)
		Industrial water	Municipal water	Ground water	Total	
Korea	2013	47,765	6,080	232	54,077	34
	2012	49,003	6,014	235	55,252	39
	2011*	103,562	5,834	205	109,601	91
Global	2013	47,765	19,847	1,069	68,681	35
	2012	49,003	18,806	827	68,636	41
	2011	103,562	17,325	780	121,667	74

* The proportion of water used by the LCD Business Division is included (the LCD Business Division became an independent company in 2012).

Waste Water Discharge

Description		Discharge (1,000 tons)	Discharge Per Unit Production (ton/KRW 100 M)
Korea	2013	44,113	28
	2012*	46,051	33
	2011**	97,370	81
Global	2013	54,257	27
	2012*	55,150	33
	2011**	102,906	62

* Discharge figures were modified due to change in waste water calculation standards in 2012
** The proportion of water used by the LCD Business Division is included (the LCD Business Division became an independent company in 2012).

Water Reuse

Samsung Electronics' water resource conservation efforts can be broadly divided into two types: minimization of water consumption through manufacturing process improvement and optimization of water use through retreatment and recycling facilities. In 2013, the company conserved a total of 45,262,000 tons of water through the following water resource conservation efforts.

Water Resource Conservation Efforts

- **Optimization of water management processes for utility systems and semiconductor production**
  Optimization of the water used for ultra pure water production, web scrubber, cooling tower, and wastewater processing facilities
- **Installation of discharge water treatment systems for optimum recycling**
  Re-processing of acid/alkaline and organic wastewater for the ultra pure water production system
  Re-treatment of sewage to be used for fire system and gardening
- **Use of discharged water in other processes**
  Re-use of ultra pure water for other processes
  Re-use of condensed water generated by the outdoor air handling unit, and concentrated water discharged from the cooling tower for the web scrubber

Water Reuse

Description		Water Reuse		Ultra Pure Water Recycling		
		Reused Amount (1,000 tons)	Reuse Rate (%)	Supply (1,000 tons)	Recovered Amount (1,000 tons)	Recovery Rate (%)
Korea	2013	34,571	63.9	27,357	12,525	45.8
	2012	34,225	61.9	29,226	13,917	47.6
	2011*	81,863	74.7	117,321	59,289	50.5
Global	2013	45,262	65.9	41,143	20,932	50.9
	2012	42,104	61.3	40,988	21,510	52.5
	2011*	90,068	74.0	128,554	66,676	51.9

* The proportion of water used by the LCD Business Division is included (the LCD division became an independent company in 2012).

Environmental Conservation Activities at Giheung Plant (Making EM Clay Balls)

- **Internal/External Communication Regarding Water Resources**

Samsung Electronics discloses water resource-related information of its operation sites to its stakeholders including employees and local communities in a transparent manner.
Employees can check the status of the company's water resource management, while the company provides water- saving guidelines and encourages its employees to apply them in their daily lives. In addition, it carries out river ecosystem preservation activities in conjunction with NGOs and students in local communities.

Impact of Wastewater Discharge on Public Waters

Samsung Electronics discharges all of its wastewater generated at its operation sites after undergoing treatment processes that meet legal requirements. Operation sites with internal treatment facilities comply with internal standards that are even stricter than legal requirements and carefully monitor the discharged water. For some of the domestic operation sites located inside industrial complexes and overseas operation sites, wastewater generated at the operation sites is first processed internally, and then re-processed through external wastewater treatment facilities before discharge.

Destination of Discharges in Korea

Operation Site	Suwon	Hwaseong	Giheung	Gumi	Gwangju	Onyang
Destination	Woncheon Stream		Osan Stream	-	-	Gokgyo Stream

Aquatic Ecosystem Preservation and Water Quality Improvement Activities

Semiconductor plants monitor the water-quality of rivers into which wastewater is discharged and its impact on the aquatic ecosystem in collaboration with local universities and continuously carry out improvement activities. Large amounts of steam are generated by the discharged water from the company's operation sites during the winter season due to temperature differences with the surrounding area. Thus, the company installed facilities to lower the temperature of discharged water below 10℃ during the winter to conserve the aquatic ecosystem and prevent disruptions of the river ecosystem. Also, the company prevented secondary damages caused by generation of streams around discharge outlets, proactively improving the river environment. Samsung Electronics will continue to monitor the water-quality of the final destinations of the discharge, as well as their aquatic ecosystems, while continuing to study ecosystem conservation and invest therein.

Waste Management

Samsung Electronics is endeavoring to prevent resource depletion and improve the resource recycling rate by minimizing resource consumption. The company's ultimate goal is to achieve 100% recycling of all waste generated by its operation sites. It is working towards achieving the target by expanding the types of waste recycled on an ongoing basis. Meanwhile, Samsung Electronics regularly visits waste processing companies to monitor their compliance with regulations and the company's standards to prevent illegal processing and illegal shipping of waste over national borders.

In order to improve the efficiency of internal energy recycling facilities, Samsung Electronics conducted facility replacement in 2013. The incinerated waste volume increased as the waste generated during the construction period was incinerated externally. As a result, the company achieved a waste recycling rate of 92% in its global operation sites, a 1.7% drop from the previous year. Meanwhile, Samsung Electronics is striving to realize eco-friendly product design and manufacturing processes to minimize landfill waste generation. Thanks to such efforts, the company's landfill waste generation reduced by 2% over the previous year despite the increase in product output. Samsung Electronics will aggressively carry out activities to enhance the efficiency of resource recycling systems in order to achieve the goal of 0.38 tons/KRW 100 million waste generation relative to sales and a recycling rate of 95% by 2015.

Waste Generation

Description		Waste Generation (tons)		
		General Waste	Hazardous Waste*	Total
Korea	2013	318,104	75,938	394,042
Global	2013	544,472	108,853	653,325

Waste Treatment & Recycling Rate

Description		Processed Waste (tons)				Waste Intensity (ton/KRW 100 M)	Recycling Rate (%)
		Recycling	Incineration (External)	Landfill (External)	Total		
Korea	2013	374,694	15,626	3,722	394,042	0.25	95
	2012	364,588	9,277	5,899	379,764	0.27	96
	2011**	490,123	12,255	22,009	524,387	0.43	93
Global	2013	601,827	32,340	19,158	653,325	0.33	92
	2012	543,233	16,627	19,614	579,474	0.34	94
	2011**	645,942	16,786	49,143	711,871	0.43	91

* Calculation is based on operation-site standards due to differences in calculation criteria in some countries.

** The proportion of waste generated by the LCD Business Division is included (the LCD division became an independent company in 2012).

Pollutant Management

Samsung Electronics conducts research and makes facility investments on environmental pollutant reduction to ensure healthy lives, not only of humanity but also of all animals and plants. Concerning pollutant discharge, the company complies with the relevant regulations and also is enforcing internal standards that are stricter than required by regulations to manage pollutants. The company installed a tele-monitoring system (TMS) in its production plants for 24-hour monitoring of emission concentration, with emergency response systems in place for handling abnormal conditions. In order to reduce pollutant emissions, it has set reduction targets by operation sites, while employing the latest technologies to eliminate pollutants for new production facilities.

Management of Air Pollutants

Release of the total amount of pollutants is increasing due to an expansion of production lines and subsequent increase in production volume. Nevertheless, Samsung Electronics has reduced the quantity of pollutant discharge by replacing its boilers with low NOx burner boilers, installing optimal prevention facilities for new and expanded production lines, and continuously performing efficiency enhancement activities at its prevention facilities.

Air Pollutant Discharge

(Unit : tons)

Description		Air Pollutant Discharge				
		NOx*	SO_x	Dust	NH_3	HF
Korea	2013	342	Minimum level	21	2	5
	2012*	284	0.008	21	1	8
	2011**	409	0.006	44	6	14

* The NOx discharge has been recalculated.

**The figures of LCD Business Division are included (the LCD division became an independent company in 2012).

Ozone Depleting Substances Management

Samsung Electronics does not use CFCs that have high Ozone Depletion Potential (ODP), among the ozone depleting substances defined by the Montreal Protocol. Instead, it uses HCFCs with relatively low ODP in refrigerators, and cooling equipment refrigerants and cleaners in its operation sites. The company plans to reduce the use of HCFCs by introducing new technologies, while cutting back the use of substances with ODP by replacing them with HFCs that do not destroy the ozone layer.

Water Pollutant Management

Samsung Electronics established a two-stage wastewater processing system by installing new wastewater processing facilities in 2012 to reduce the increasing discharge of waste water and pollutants due to expansion of its production lines. By doing so, the company achieved a reduction of the concentration and quantity of discharged pollutants. Semiconductor production facilities have been making ongoing efforts to reduce pollutants. They have applied the inorganic wastewater reuse system since 2008, while developing an acid/alkaline wastewater recycling technology in 2011 and establishing the reuse system in 2012, followed by expansion of organic treatment facilities in 2013.

Water Pollutant Discharge

(Unit : tons)

Description		Water Pollutant Discharge				
		COD	BOD	SS	F	Heavy Metals
Korea	2013	149	55	61	142	9.7
	2012*	143	85	91	175	20.2
	2011**	755	210	91	345	21.6
Global	2013	376	61	110	188	10.1
	2012	300	85	154	241	20.6
	2011**	876	210	184	430	25.3

* The water pollutant discharge has been recalculated

** The figures of LCD Business Division are included (the LCD division became an independent company in 2012).

Soil Pollutants Management

Samsung Electronics prevents soil pollution by chemicals at the source by separately storing chemicals used in the production processes at impervious storage facilities. In addition, the company analyzes the components of landfill-waste generated at its operation sites and processes it through authorized waste processing companies.

Management of Hazardous Materials

Samsung Electronics performs pre-assessment based on the MSDS (Material Safety Data Sheet), chemical warranty letters, and LoCs (Letters of Confirmation) at the procurement stage. Permitted chemicals are strictly monitored in terms of their methods of use and place of use, while countermeasures are in place for possible incidents. The company conducts regular training for workers handling chemicals and inspects storage and handling facilities on an ongoing basis. In addition, it ensures that chemicals are used only at places equipped with safety equipment and proper protection gear. The volume of hazardous chemicals used is steadily on the rise owing to expanded production lines, increased product quantities, and increased use of less hazardous chemicals. The volume of hazardous materials used increased by 13.1% over the previous year and Samsung Electronics strives to prevent their leakage internally or externally through strict control of all the processes ranging from their transportation to storage, use and disposal.

Hazardous Materials Used (Korea)

Description	Total Volume (1,000 tons)	Per Production Unit (ton/KRW 100M)
2013	344	0.24
2012	304	0.22
2011*	333	0.28

* The proportion of materials used by the LCD Business Division is included (the LCD division became an independent company in 2012).

Biodiversity Conservation: Basic Philosophy and Action Plan

Demand for the protection of biodiversity is increasing since an international agreement on biodiversity protection was signed in 1992. Samsung Electronics is responding to changing demands by raising awareness on the importance of biodiversity. We have created a basic philosophy and action plan on biodiversity protection to promote it in our business activities.

Basic Philosophy of Biodiversity Conservation

"Samsung Electronics recognizes the benefits of healthy ecosystems and rich biodiversity, and we shall minimize negative impacts on biodiversity and actively promote ecosystem protection activities."

Action Plan on Biodiversity Protection

1. **Value Recognition**
   All employees shall regard biodiversity conservation activities as an important part of green management.
2. **Assessment and Reduction of impact on Environment**
   Analyze lifecycle impact of our products on biodiversity and the ecosystem while making an effort to minimize all negative impacts identified.
3. **Biodiversity Conservation Activities**
   Place a higher priority on environmental management of operation sites with higher biodiversity and implement biodiversity protection activities tailored for each site.
4. **Communication**
   Maintain good communication with stakeholders including employees, local communities and NGOs, and collaborate with them to make contributions in local biodiversity protection initiatives.

Green Communication

Stakeholder Communication

Samsung Electronics is carefully listening to feedback from its stakeholders through diverse channels. The four axis of green communication pursued by the company are global eco-partnerships, employee environmental communication, consumer-tailored campaigns and green community programs.

| Green Communication |

Global Eco-Partnerships

Samsung Electronics is implementing global eco-partnership projects with various organizations. The company has been implementing a project in Cambodia aimed to create jobs and prevent environmental pollution caused by the illicit burial of electronic waste (e-waste) in the country in partnership with KOICA (Korea International Cooperation Agency) and UNIDO (United Nations Industrial Development Organization) since July 2012. Through the project which will be continued until 2015, it will train Cambodian engineers who will repair electronics and process E-waste.
Meanwhile, Samsung Electronics is endeavoring to protect endangered natural monuments in Korea and conserve the ecosystem through the "White-naped Crane Restoration Project" in partnership with Kyungpook National University and the Daegu Regional Environment Office.

Green Job Creation in Cambodia through Partnership with UNIDO

The company is educating instructors specializing in electronics repair services and e-waste management in partnership with Cambodia's Ministry of Labor, Ministry of Environment, and National Technology Training Institute by dispatching its internal experts to the country. The instructors who have completed specialized education are currently training electronics repair engineers in five cities in Cambodia to prevent environmental pollution caused by the unlawful burial of e-waste and provide jobs for Cambodian youth. As of December 2013, Samsung Electronics trained a total of 110 engineers in Cambodia, most of whom successfully obtained jobs. More and more electronic appliances are being used in Cambodia every year, but a significant amount of malfunctioning products are needlessly discarded due to a lack of product repair technologies and personnel. Samsung Electronics plans to select and nurture electronic equipment processing companies in five regions including the nation's capital, Phnom Penh, and support the employment of the trainees and encourage them to start their own business, while proposing e-waste handling options to the Cambodian government.

As part of the project, Cambodian vice minister of environment and government officials visited Samsung Electronics headquarters in Korea, Samsung service centers, recycling centers and the Ministry of Environment, which provided an opportunity for them to learn first-hand about Korea's electronics service and advanced recycling-related technologies.

| Training engineers to repair e-waste and electronic equipment |

| Awarding certificates of completion to repairing trainees |

| Cambodian government officials' visit to Samsung Electronics headquarters |

White-naped Crane Restoration Partnership

Since 2002, Samsung Electronics' Gumi operation site has been involved in bird feeding at Haepyeong migratory bird habitat near its site to conserve biodiversity. After the implementation of the Nakdong River restoration project in 2010, however, the habitat environment for migratory birds such as white-naped cranes and hooded cranes underwent change and their numbers declined. In response, Samsung Electronics signed a regional partnership in May 2013 with Kyungpook National University, the Daegu Regional Environment Office, and Gumi City as an industry-academia-government coalition. Starting with the introduction of two pairs of white-naped cranes in 2013, the partnership will continue to introduce two pairs of white-naped cranes every year until 2017 and ultimately release them back into nature after their adjustment to wildlife.

| Signing of Biodiversity Partnership |

| White-naped Crane Introduction Ceremony |

| White-naped Crane, an Endangered Natural Monument |

| Migratory Bird Feeding |

Membership and Activities in Associations

WSC (World Semiconductor Council)

Samsung Electronics is taking the lead in the industry's efforts to reduce semiconductor processing gas (perfluorocarbons or PFC) emissions and energy consumption at semiconductor facilities through its participation in WSC activities. In 1999, the company agreed, along with WSC member companies, to apply 'PFC Best Practice Guidance' to new production facilities by 2020. Currently, WSC members share the development of the industry's common guideline methodologies, trends in regulations on chemicals, and successful practical cases at the EHS Conference twice a year.

KBCSD (Korea Business Council for Sustainable Development)

Samsung Electronics is participating in GHG reduction projects such as the GHG reduction collaboration project as a member company of the KBCSD, a Korean network of the WBCSD (World Business Council for Sustainable Development), thereby contributing to the sustainable development of Korean society.

EICC (Electronic Industry Citizenship Coalition)

The EICC was established in 2004 by leading global electronics companies to discuss CSR issues and potential response initiatives. Samsung Electronics is endeavoring to spread green management among Korean companies through its activities at EICC.

KAEE (Korea Association of Electronics Environment)

Samsung Electronics, a founding member of KAEE, was actively involved in KAEE's projects designed to establish an e-waste collection system in Korea, including free-of-charge collection of large e-waste by visiting the sites and arranging free-of-charge collection of small e-waste at shops and service centers, working hard to build a resource-recycling society.

Employee Communication

Samsung Electronics organizes various eco-friendly events, training programs, voluntary services, and campaigns in order to encourage its employees to take an interest and participate in environmental protection activities and actively engage in communication with its employees.
In 2013, the company provided expanded education programs for its employees' children with a focus on environmental education, while offering diverse environmental information to instill eco-friendly insight into its employees.

Gwangreung Forest Ecological Preservation Volunteer Activities

Gwangreung Forest Ecosystem Protection Campaign

Since 2011, Samsung Electronics has been striving to preserve the biodiversity of Gwangreung Forest designated as a biosphere reserve by UNESCO. Every year 200 employees carry out cleaning-up activities at Gwangreung Forest to eliminate invasive plants that disrupt the ecosystem and clean the streams around the forest. The company also provides diverse ecological information to its employees who participate in the Gwangreung Forest cleanup activities to help them appreciate the beauty of indigenous plants and the value of forests through a forest-explanation program.

Riding Electric Bicycles

Spring Festival

The "Spring Festival" was held in May 2013 in Suwon, Korea with the participation of 30,000 employees and their families where eco-friendly campaigns on the theme of "PlanetFirst" Samsung Electronics' eco-friendly initiative were featured. The employees and their families participated in first-hand eco-friendly experience activities such as riding electric bicycles and making natural detergents, understanding the meaning of the "PlanetFirst" initiative and learning about eco-friendly lifestyles.

Discarded Mobile Phone Collection Campaign

Discarded Mobile Phone Collection Campaign

Samsung Electronics held a campaign to collect discarded mobile phones to join the "2013 National Discarded Mobile Phone Collection Campaign" organized by the Korean Ministry of Environment. The company's CS Environment Center collected discarded mobile phones, batteries, and chargers for two weeks in November 2013. Samsung Electronics will plan to expand the scope of the campaign in the future to facilitate discarded mobile phone collection and recycling and raise environmental awareness of its employees.

Green Insight

Green Insight

Since 2013, Samsung Electronics has featured "Green Insight" an environmental column, through "Samsung Electronics Live" an internal communication channel, providing insights on environmental themes. "Green Insight" provides accurate information on global environmental issues and the latest environmental trends including conflict minerals, eco-marketing and passive houses to Samsung employees. The company will continuously expand the channels featuring the Green Insight.

Samsung Electronics Live Communication

Samsung Electronics Live Communication

"Samsung Electronics Live" an internal online communication channel, allows employee to share the company's eco-Products and eco-friendly activities through articles. In 2013, it introduced the company's diverse environmental activities including winning international environmental awards, eco-friendly packaging materials and ecological preservation volunteer activities, sharing information with employees and providing a channel for exchanges of opinions.

Customer-Tailored Campaigns

Samsung Electronics organizes campaigns tailored to different consumer groups including customers, local communities and children to spread their purchase of eco-products and disseminate the concept of "PlanetFirst" a campaign that puts the environment first. In 2013, Samsung Electronics received the "Green Store" certification from the Korean Ministry of Environment as the first home appliance distributor to receive the certification, introducing the company's eco-friendly features products to consumers. And Samsung Electronics America teams up with ENERGY STAR and Boys & Girls Clubs of America, one of the largest youth organizations in the United States, to teach children and young people about saving energy and protecting the climate.

The Green Store Certification

Digital Plaza Green Stores

The Digital Plaza, Samsung Electronics product store, won the "Green Store" certification for the first time as a home appliance distributor in August 2013. The Green Store certification is issued to stores that have made environmental contributions such as eco-friendly product sales and energy saving. A total of five Digital Plaza branches received the certification. At the company's Green Store branches, specialized staffs are on standby to provide consumers with information on eco-friendly products and ways to save energy of home appliances.

Team ENERGY STAR

Team ENERGY STAR in United States

In October 2013, Samsung and ENERGY STAR celebrated ENERGY STAR Day with festivities at the Boys & Girls Club of Atlantic City. In light of the severe damage that the Club suffered from Super storm Sandy, partners BGCA, ENERGY STAR and Samsung gathered to unveil the refurbished Pennsylvania unit of the Boys & Girls Club of Atlantic City and celebrate the accomplishments in teaching Club members and their families about the importance of saving energy and protecting the environment from climate change. The fun-filled ENERGY STAR Day included "Go Green" activities, a photo contest and prizes.

PlanetFirst Eco School

PlanetFirst Summer School

The second PlanetFirst Summer School, an environmental education program, was held for two days in July 2013, inviting 40 elementary school students to participate in outdoor first-hand experience learning and field trips. Participating children learned about endangered animals affected by climate change. They also visited the "Green Growth Museum" and "Electric Energy Museum" where they had first-hand experiences in renewable energy sources. They also had a chance to use eco-products at the "Dilight Eco-Zone" at the Seocho Samsung Building.

Global Action

Global Action Event in Brazil

Forty employees of the Manaus subsidiary in Brazil participated in the Global Action environmental event in May 2013 together with 3,000 local children. The children had the opportunity to raise awareness of environmental conservation and eco-friendly lifestyles through water-saving education in the form of games and writing on forest degradation.

Green Community Programs

Samsung Electronics runs a wide range of green programs for local communities to build sustainable local communities and promote healthy communication with local residents nearby its operation sites by returning corporate profits to society. The company has established the "Digital Village" to help low-income countries achieve self-reliance and provide necessary services for living such as medical, education and other convenience services. It has also formed communication councils with local residents nearby its operation sites and held meetings on such topics as the environment and safety at operation sites on a regular basis. It also runs a wide variety of global environmental conservation programs to improve the environment in local communities.

A Panoramic View of the Samsung Digital Village

The Medical Center

Samsung Digital Village

Samsung Electronics launched the 'Samsung Digital Village' in Johannesburg, South Africa, in October 2013. As the company's first Digital Villages initiative that assists low-income countries' self-reliance, the Digital Village in Johannesburg is a project that concentrates facilities using solar power in a single village to promote medical, education and living conveniences.

The Digital Village consist of solar-powered tele-medical center and solar-powered Internet School which offers interactive multimedia education by operating large displays and notebook PCs using solar power. Starting from South Africa, Samsung Electronics will expand the project to include Ethiopia and Gabon to address poverty and diseases in Africa and assist their economic independence.

The Samsung Electronics- Hwaseong Citizens Communication Council

The 'Samsung Semiconductor Story' Blog

The Communication Council & Blog at Semiconductor Sites

In April 2013 Samsung Electronics formed the Samsung Electronics-Hwaseong City Communication Council in partnership with citizens of Hwaseong City. The council consisting of Samsung employees and residents near the Hwaseong Campus discusses the environment, workplace safety, and social contribution activities at its regular meetings. In addition, the company has installed three LED displays to offer nine types of environmental information in real time including three on air quality, five on water quality and one on noise, thereby cementing a trusting relationship. Meanwhile, Samsung Electronics has been operating a blog titled "Samsung Semiconductor Story" since 2012 to enhance online communication. The "Health" section in the blog features a column offered by the Samsung Electronics Health Research Institute, the first private research institute on industrial health, while its "Misunderstandings and Truth" section serves as a channel to promote ongoing communication on working environments at semiconductor plants with stakeholders.
(http://www.samsungsemiconstory.com/)

The Waste-Free Day in Germany

'Waste-Free Day 'in Germany

Since 2011, the German subsidiary of Samsung Electronics has held a "Waste-Free Day" to participate in environmental protection campaigns and raise environmental awareness among its employees. On this day, employees are engaged in activities to clean the environment such as picking up garbage in the vicinity of the operation site for one hour during working hours. In October 2013, 100 employees participated in the program and picked up garbage.

The 'World Water Day' Commemoration Events

Tree Planting with Local Community Members

'World Water Day' Commemoration Activities

On March 22, which is the 'World Water Day', Samsung Electronics conducts activities to commemorate the day in operation sites in Korea (Suwon, Gumi, Giheung, Hwaseong, Onyang, and Gwangju) and abroad (China, Brazil, Malaysia) in an effort to publicize the importance of water resources and protect them. Each operation site across the globe takes care of a river under the "One Company, One River" management scheme to protect water resources on an ongoing basis. On this day, the Indonesian subsidiary also planted trees along with local community members in addition to employee campaigns and stream cleanup activities.

Environmental Cleanup Activities by New Employees

"One company, One River" and "One Company, One Village" Campaigns

The Chinese subsidiaries are engaged in "One Company, One River" and "One Company, One Village" campaigns. New employees of the Tianjin subsidiary carried out clean-up activities in the Micro-Electronic Industrial Park near the company to raise their awareness of environmental protection. It also held an environmental campaign for children at an elementary school in Jinghai County, Tianjin.

The Forest Conservation Event

Forest Conservation Event in Brazil

The Brazilian subsidiary participated in a forest conservation event jointly organized by the government and enterprises to protect the degraded forest. About 200 employees planted trees in the deforested areas near the Amazon, while gaining awareness of the importance of forest.

The Tree-Planting Event in India

The Tree-Planting Event in India

The Indian subsidiary plants trees every year to protect the forest devastated by industrialization. In September 2013, thirty employees and four government officials from the Forestry Service planted 1,500 trees, thereby contributing to environmental protection in areas near the operation site.

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