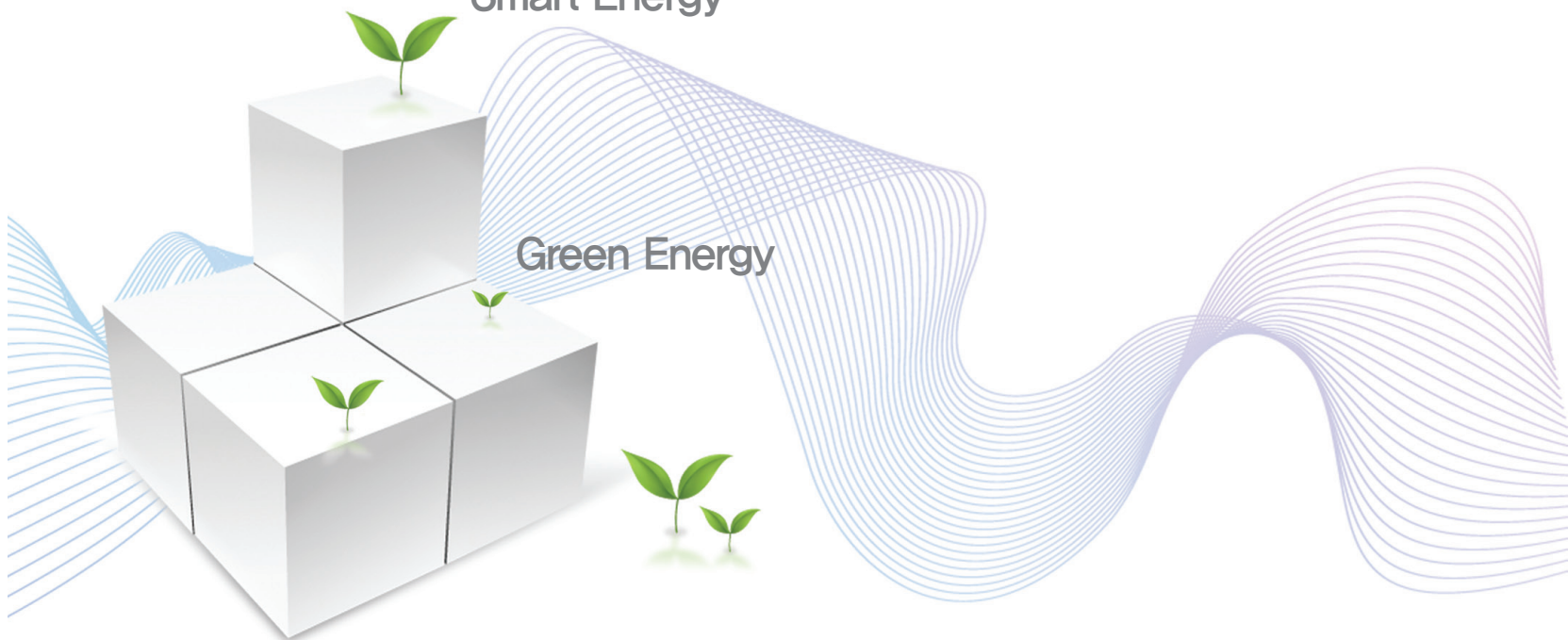


# Smart today Green Tomorrow

Sustainability Report 2012

Smart Energy

Green Energy



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# About This Report



This is the 8th Sustainability Report published after KEPCO joined the UN Global Compact in August 2005. With this report, KEPCO shares with stakeholders its efforts to achieve sustainability and its economic, environmental and social performance.

## Guidelines

KEPCO Sustainability Report 2012 was prepared in accordance with the GRI (Global Reporting Initiative) G3 Guidelines, and based on the materiality tests for listening to the opinions of diverse stakeholders. Also, the financial data in this report are in accordance with the K-IFRS

## Reporting period

This report contains quantitative performance data from January 1, 2011 to December 31, 2011, and some of the non-quantitative performance data of the first half of 2012. This report primarily covers KEPCO's sustainability management performance, but part of the environment section includes the performance of six power generation companies, or GENCOs, wholly owned by KEPCO: Korea Hydro & Nuclear Power, Korea South-East Power, Korea Midland Power, Korea Western Power, Korea Southern Power and Korea East-West Power.

To ensure the uniformity of the sustainability management of all KEPCO group companies, the GENCOs are already publishing their own sustainability reports.

## Major changes and scope

No significant change in the corporate size, ownership structure or business occurred in the reporting period. KEPCO faithfully incorporated all indicators set forth in the GRI Guidelines in this report, and key performance indicators for the past three years are also disclosed in the interest of enhancing sustainability management performance.

## Commitment to credibility

In an effort to ensure the credibility of the report, KEPCO sought the advice of external experts, starting from the design stage. The data herein are verified in accordance with the AA 1000 AS principles (materiality, completeness and responsiveness). The details of the review are found in the section entitled "Third Party Review."

## Distribution and feedback

This report is published both in Korean and English, and readers' feedback via postal mail, e-mail, or the KEPCO website is always much appreciated.

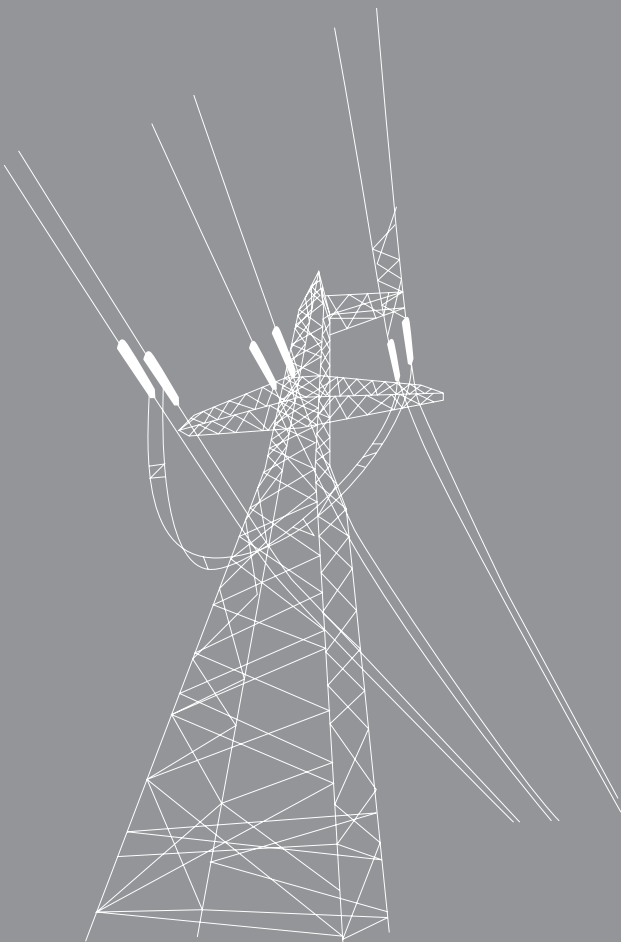
You can direct your inquiries about this report to:

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Corporate Strategy Team, Future Strategy Department

Phone: 02-3456-3523 Fax: 02-3456-3598

E-mail : [epic@kepco.co.kr](mailto:epic@kepco.co.kr)







## **Power for Green**

---

Making the Earth beautiful  
with eco-friendly energy

KEPCO is creating a world of green energy  
where nature and mankind coexist  
by developing eco-friendly green technology  
and expanding green energy.

KEPCO will take the lead in creating  
a clean environment for future generations.





## **Power for Human**

---

**Warm the world  
by sharing and communicating**

To make a world where everyone can be happy,  
KEPCO will become a light of hope  
that shines all over the world  
and contributes to mankind and society.

KEPCO will communicate  
with stakeholders and create a society  
of shared growth based on clean and  
transparent management.







# **Power for Future**

---

Enriching the future  
with challenge and innovation

KEPCO has been stably supplying  
electric power of the best quality for 114 years,  
and writing the 'history of light.'

Now KEPCO is making  
a new future by developing Green & Smart technology  
and energetically challenging  
the global market.

## 1800's HISTORY

- 1887** Lighted the first electric lamp in Korea (Geoncheongung Palace in Gyeongbokgung Palace)
- 1898** Founded Hansung Electric Company



## 1900's HISTORY

- 1900** Hansung Electric Company lighted 3 street lamps on Jongno (first private street lamps)
- 1944** Completed the construction of Supung Hydroelectric Power Plant (600,000kW)
- 1961** The Electric Utility Act was proclaimed, and Korea Electric Company Ltd. was founded (3 companies were integrated)
- 1964** Limited power transmission was lifted for the first time after Korea gained independence in 1945.
- 1965** The Act on the Promotion of Electrification in Agricultural and Fishing Villages was proclaimed.
- 1968** Installed capacity exceeded 1,000,000kW.

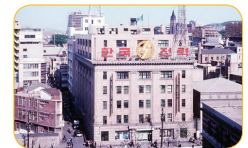


- 1978** Kori Unit 1 was completed (587,000kW)



- 1982** KECO was renamed Korea Electric Power Corporation

- 1989** KEPCO was listed on the Korea Stock Exchange.



## 1980's HISTORY



# KEPCO

# KEPCO history : 114-year-old KEPCO, founded in 1898 as Hansung Electric Company, gets ready for a new century with 'New Area, New Contents.'

## 1990's HISTORY

- 1994** KEPCO was listed on the New York Stock Exchange (\$300 million).
- 1995** Won the project for operating the Malaya Thermal Power Plant in the Philippines
- 1997** KEDO NPP groundbreaking ceremony



## 2000's HISTORY

- 2000** The peak demand exceeded 40 million kW
- 2001** The power generation business of KEPCO was spun off into six power generation subsidiaries.
- 2002** Ilijan Combined Cycle Power Plant, the largest in the Philippines, was completed.
- 2005** Increased voltage to 220V for distribution lines, Began to supply electric power to the Gaeseong Industrial Complex
- 2006** Received the "Edison Award," and established the independent business division system
- 2007** Exported the first NPP (UAE)
- 2011** Named the best institution in integrity evaluation for 6 consecutive years, and ranked No.1 in Customer Satisfaction for thirteen years in a row



# History



# CEO MESSAGE

“ This year KEPCO established a New Vision of socially responsible management, 'A global leader in social contribution for the happiness of mankind and society' and proclaimed a leap forward in socially responsible management. ”

---

## We will create a sustainable future of shared growth based on the spirit of creativity and co-prosperity

Dear stakeholders of KEPCO!

We would like to express our deepest gratitude to all of you for your continuous encouragement and support.

Since the foundation of Hansung Electric Company in 1898, KEPCO has stably supplied electric power, the driving force behind the national industries of Korea, and led the economic development for 114 years. Now KEPCO established the vision of 'Global Top Green & Smart Energy Pioneer,' and is writing a new history under the spirit of 'New Area, New Contents.'

The rapid changes in the business environment, such as the energy paradigm shift due to climate change, acceleration of the convergence between industries and the emergence of soft power, are requiring creative thinking and innovation. In addition, with the global economic recession and the economic slump in Korea, expectations about corporate social responsibility are rising. We need new changes and challenges to make a society where everyone can grow and overcome the developmental gap due to the imbalance in information between large corporations and SMEs, the gap between the haves and the have-nots, and the generation gap due to the absence of communication,.

In 2011, KEPCO overcame the confusion caused by the September 15 Rolling Blackout with one mind, and was committed to innovating the electric power supply and demand system to stably supply electric power. We added spurs to management rationalization, and conducted the largest organizational reshuffle since its foundation, and innovated the procurement and engineering processes to streamline our management system. We found overseas business opportunities and developed our workforce to reinforce our global competencies, while laying the foundation for socially responsible management by engaging in diverse social contribution activities and reinforcing support for SMEs.

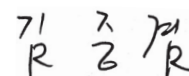
To lead in fulfilling social responsibilities as the leading energy enterprise, KEPCO will actively support the vulnerable social groups and SMEs to make a sustainable corporate ecosystem where everyone can grow and prosper together. This year KEPCO established a New Vision of socially responsible management, i.e. 'A global leader in social contribution for the happiness of mankind and society,' and proclaimed a leap forward in socially responsible management. We will create jobs for the socially vulnerable groups by establishing a social enterprise, practice management of sharing by expanding social contribution at home and abroad, and make the world a better place for all stakeholders by practicing win-win management to revive SMEs. By stably supplying electric power in Korea, we will contribute to economic development, and increase our revenues by actively making inroads into overseas markets. Also, we will generate growth engines of the future by developing eco-friendly green power technology, and take the lead in making a clean and green environment by realizing eco-friendly values in the electric power supply chain.

A futurologist Jeremy Rifkin predicted that the future will be an age of energy with green energy and smart power grids playing the central role. As the first mover leading the future world of energy, KEPCO will create a virtuous circle of sustainable values, and become a global enterprise bringing happiness to mankind and society.

I hope that you will continue to encourage and support us.

October 2012.

KEPCO President & CEO



## Global Top Green & Smart Energy Pioneer



▶ KEPCO declares a New Vision



▶ KEPCO reinforced the stable power supply system



▶ KEPCO secured global competency by making the front log of overseas projects.



▶ KEPCO reinforced its competency by innovating its organization and HR



# KEPCO

# Highlights of sustainability management of 2011



▶ Eco-friendly power supply process



▶ Safety and health (HSE) management system in place



▶ Named the best institution in integrity evaluation for 6 consecutive years, and ranked No.1 in Customer Satisfaction for the thirteen years in a row



▶ KEPCO increased its social contribution activities by intensively supporting the vulnerable social groups

# Highlights





## Roles of KEPCO

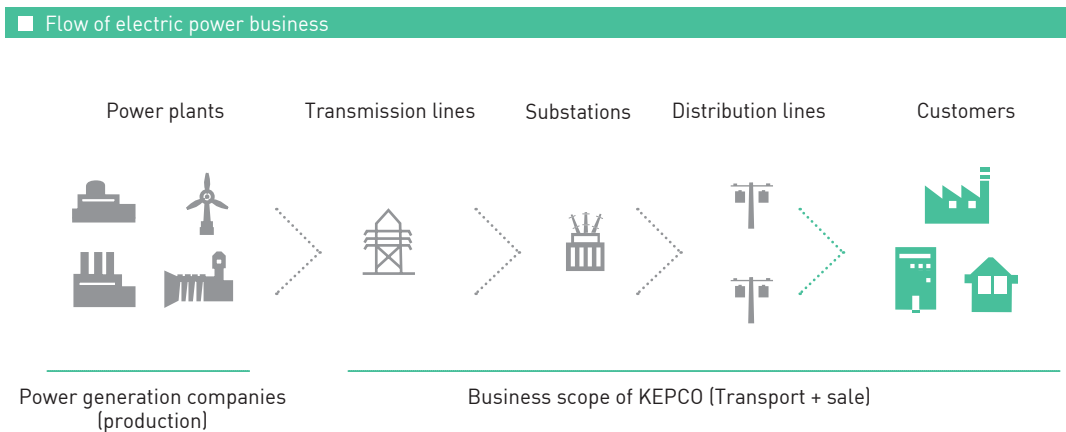
### Roles of KEPCO

KEPCO is a special corporation incorporated under the "Korea Electric Power Corporation Act" for the purpose of promotion of development of power sources, stabilization of electric power supply and demand, and contribution to the national economy, and classified as a market type public corporation under the Act on the Operation of Public Organizations. KEPCO is carrying out diverse business projects according to its foundation objectives, for example, development of power resources, power generation, transmission, transformation, distribution, sales of electricity, research and development, overseas business, investment or contribution, and businesses utilizing the real estate it owns.

### Duties of KEPCO



### Flow of electric power business



# KEPCO Present Condition

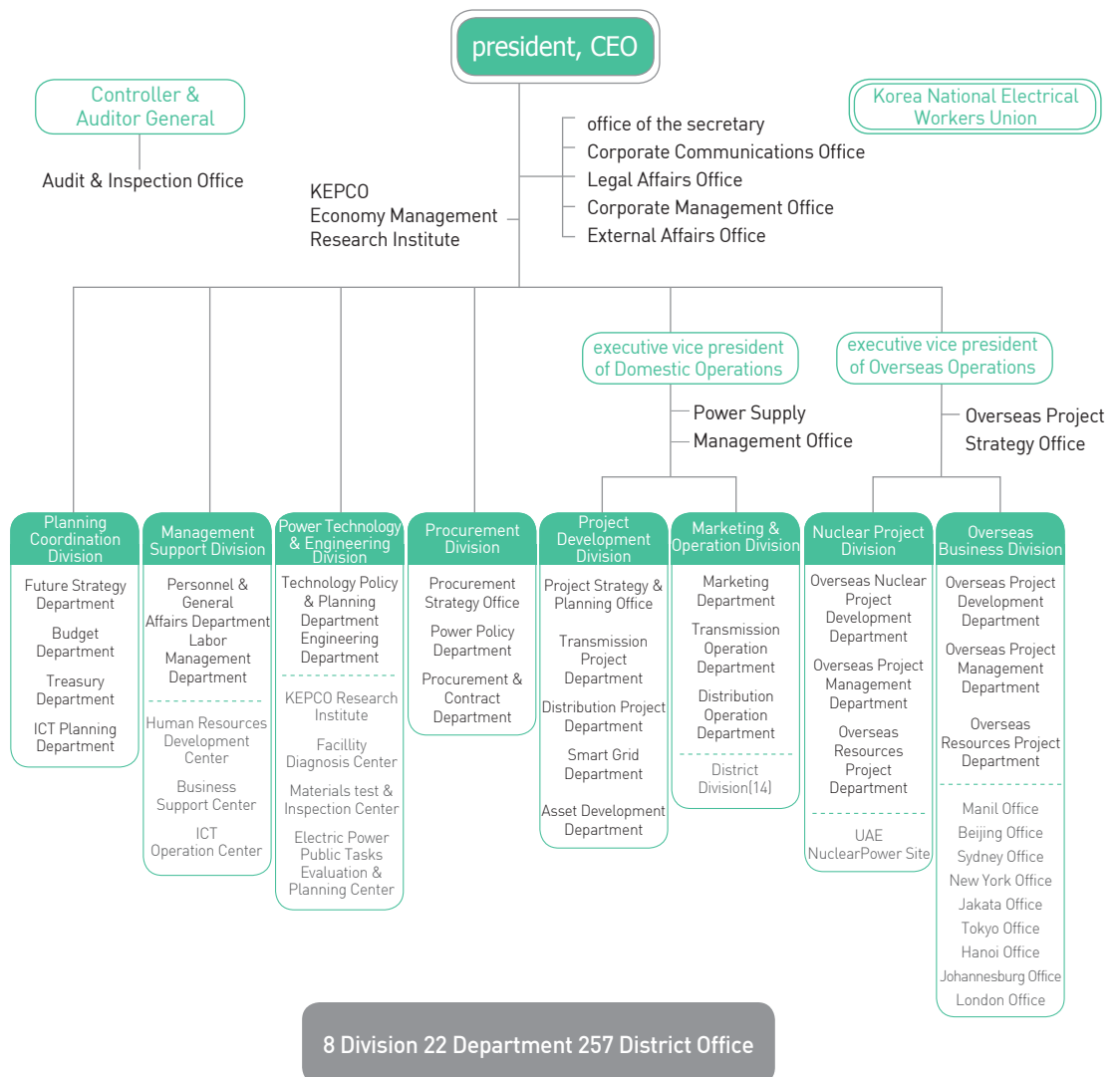
## Organization

Since its foundation in February 2011, KEPCO has gone through the largest organizational reshuffle. Based on the dual axes of domestic operations focused on public interest and overseas operations focused on profitability and job creation, KEPCO enhanced its transparency by reinforcing the horizontal cooperation between departments.

As the control tower of stable power supply and demand, KEPCO newly established the Power Supply Management Office, and Procurement Division to reinforce the pricing and engineering capabilities. Also, KEPCO is going to strengthen its overseas operations in a bid to dynamically penetrate global markets.

The head office consists of 8 Divisions like the Planning & Coordination Division, and 33 Departments (Offices). Its operations cover a total of 257 locations including 9 development offices under the Project Development Division, 14 District Divisions/177 branches/40 power transmission branch offices under the Marketing & Operations Division, the UAE Nuclear Power Site under the Nuclear Project Division, 8 overseas branches under the Overseas Business Division, and 8 special offices like the Management Research Institute.

KEPCO's organization chart



## KEPCO overview

(as of the end of December 2011)

■ KEPCO overview	
Company name	Korea Electric Power Corporation
Head office	512, Yeongdongdaero, Gangnam-gu, Seoul
Total assets	KRW136 trillion
Sales	KRW43.5 trillion
No of employees	19,303
Electric power sold	455.1 billion kWh
Shareholders	Korea Finance Corp 29.94%, Government 21.17%, Foreigners 23.38%, general shareholders and others 25.51%
Subsidiaries	Domestic: 11 including power generation companies and group companies Overseas: 22 companies including investment companies and local subsidiaries
IPO markets	Korea Exchange (KRX) in 1989 New York Stock Exchange (NYSE) in 1994

## Power-generation companies and subsidiaries

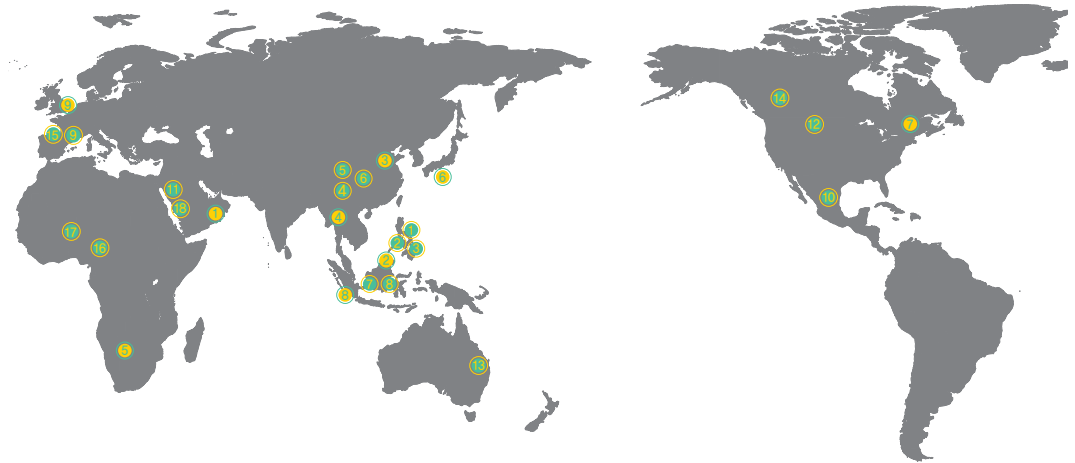
As of Dec 31, 2011 (Unit: KRW billion, %)

■ Power-generation companies and subsidiaries				
Name	Major business	Capital	KEPCO's shares	
			Amount	Ratio
Korea South-East Power Co. Ltd.	Power generation and supply	2,901	2,901	100
Korea Midland Power Co. Ltd.	Power generation and supply	1,373	1,373	100
Korea Western Power Co. Ltd.	Power generation and supply	1,589	1,589	100
Korea Southern Power Co. Ltd.	Power generation and supply	2,288	2,288	100
Korea East-West Power Co. Ltd.	Power generation and supply	2,829	2,829	100
Korea Hydro & Nuclear Power Co. Ltd.	Power generation and supply	12,122	12,122	100

As of Dec 31, 2011 (Unit: KRW billion, %)

■ Power-generation companies and subsidiaries				
Name	Major business	Capital	KEPCO's shares	
			Amount	Ratio
KEPCO Engineering & Construction Company. INC.	Korea Plant Service & Engineering	76	57	74.86
KEPCO Plant Service & Engineering Co. Ltd	Plant maintenance and repair	90	68	75
KEPCO Nuclear Fuel Co. Ltd.	Nuclear fuel manufacturing	932	898	96.4
KEPCO Knowledge, Data & Network Co. Ltd.	Information and Telecommunications service	640	640	100
KEPCO-Uhde. INC	IGCC Technology Engineering, License	172	77	45

## Global network



### Overseas Business Division and branches

1 UAE Nuclear Power Site  
Abu Dhabi Branch Office  
Murroor Road (4th st), al Mamoura,  
B Po Box 112010, Abu Dhabi, UAE  
Phone:+971-2-659-5590  
Fax:+971-2-659-5666

2 Manila Branch KEPCO  
18th Floor, Citi Bank Tower,  
8741 Paseo de Roxas, Salcedo Village,  
Makati City 1227, Philippines  
Phone: 63-02-848-0231  
FAX : 63-02-848-0013

3 Beijing Branch KEPCO  
2702, Tower A, Tianyuangang Center No.C2,  
Dongsanhuanbeilu, Chaoyang District,  
Beijing, China  
Tel : 86-10-6466-9426  
Fax : 86-10-6466-9436

4 Hanoi Branch KEPCO  
1112, Charm Vit Tower,  
117 Tran Duy Hung, Cau Giay, Hanoi, Vietnam  
Phone: 84-4-3831-5145  
FAX : 84-4-3831-5103

5 Johannesburg Branch KEPCO  
18th floor, Sandton City Tower  
Corner Rivonia Road & 5th St. Sandton  
P.O. Box 786703, Sandton City 2146,  
South Africa  
Phone: 27-11-784-2940  
Fax: 27-11-784-2983

6 Tokyo Branch KEPCO  
3rd Fl. Toranomon Denki BLDG,  
2-8-1 Minakoku, Tokyo, Japan  
Phone: 81-3-3503-4661

7 New York Branch KEPCO  
400 Kelby Street, Parker Plaza 7th Floor,  
Fort Lee, NJ 07024, U.S.A  
Phone:1-201-613-4001  
Fax : 1-201-613-40093

8 Jakarta Branch KEPCO  
Plaza Bapindo- Menara  
Mandiri Tower 20th Jl.Jend.  
Sudirman Kav. 54-55 Jakarta  
12190 Indonesia  
Phone: 62-21-521-0021  
FAX : 62-21-520-5775

9 London Branch KEPCO  
9-13 Cursitor street LONDON EC4A 1LL  
Tel : 44-79-3173-4348  
Fax : 44-20-7404-1191

### Overseas subsidiaries

10 KEPCO International Hong Kong Ltd.  
Supporting the power generation project in  
Malaya, the Philippines

11 KEPCO International Philippines Inc.  
Supporting the power generation project in  
Ilijan, the Philippines

12 KEPCO Philippines Holdings Inc.  
Supporting the power generation project in  
Naga and Cebu, the Philippines

13 KEPCO Gansu International Ltd.  
Supporting the construction and operations  
of wind power in Gansu, China

14 KEPCO Neimenggu International Ltd.  
Supporting the construction and  
management of wind power in Neimenggu  
and Liaoning Province, China

15 KEPCO Shanxi International Ltd.  
Supporting the project of combining mine  
and power generation in Shanxi, China

16 PT Bayan Resources TBK.  
Developing the bituminous coal  
mine in Indonesia

17 PT Adaro Energy Tbk  
Developing the bituminous coal mine in  
Indonesia

18 KEPCO Netherlands S3 B.V.  
Supporting the construction and  
operation of UAE Shuweihat Power Plant

19 KEPCO Holdings de Mexico  
Supporting the construction and  
operation of Mexico Norte II Power Plant

20 KEPCO Netherlands J3 B.V  
Supporting the construction and  
operation of the Jordan IPP3 project

21 Strathmore Minerals Corp  
Strathmore Minerals Corp.  
Supporting the development of the Gas  
Hill mine in the US

22 KEPCO Australia Pty Ltd.  
Supporting the project of Cockatoo,  
Moolarben mine operation

23 KEPCO Canada Energy Ltd.  
Supporting development of the Cree East,  
Dennison and Waterbury mines in Canada

24 KEPCO Netherlands B.V.  
Supporting the Saudi Rabigh project

25 KNOC Nigerian East/West Oil co.,Ltd  
Developing oil and gas in Nigeria

26 Korea Imouraren Uranium Investmant  
Supporting the development of  
the Imourarenmine in Niger

27 KEPCO Middle East Holding Company  
Supporting the Jordan gas-fired combine  
cycle power project

## KEPCO Vision

### KEPCO Vision

To become one of the major energy enterprises leading in global green growth KEPCO declared a new Vision: "Global Top Green & Smart Energy Pioneer KEPCO".

KEPCO will secure world-best competitiveness and make the Earth a cleaner place by developing Green & Smart technology, and contribute to the development of the global industry, economy and society by making inroads into overseas markets. To cope with the uncertain business environment, KEPCO will discover 'New Area, New Contents' and become a global enterprise leading the energy industry of the future with endless challenge and innovation.

### "Global Top Green & Smart Energy Pioneer"

"Contributing to improvement of the quality of life of people and the development of the global industry, economy and society, and making the Earth beautiful and mankind happy"



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# CEO's management policies

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Implementation  
policies

direction

---



## " Global thinking and future-oriented business structure "

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- Benchmarking global best practices to become global No. 1 in all areas
- Pioneering new business areas by predicting future trends



## " Helping employees achieve self-realization and contributing to the wellbeing of humanity "

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- Creating an enjoyable work environment by implementing a people-oriented, creative and dynamic corporate culture
- Providing top-tier green energy services contributing to the happiness of mankind

means

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## " Pursuing harmony and shared growth based on trust "

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- Making a harmonious organization by building trust through honesty and communication
- Winning social support through transparent communication with stakeholders and ethical management



## " Challenging the future with no fear of change "

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- Continuously changing and challenging to overcome limitations rather than being content with the present
- Securing future competitiveness by turning crisis into an opportunity through creative innovation and qualitative change

directing point

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## " Achieving the best corporate value "

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- Creating real values for all stakeholders including customers, shareholders and employees
- Maximizing values in all aspects including talented employees, corporate culture, technology, brand and financial soundness



## " Global management to expand overseas "

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- Trying to become a beloved company by creating various values and leading shared growth
  - Trying to become a sustainable company by producing outcomes in terms of economy, environment and society
-

## Sustainability management operational mechanism

### Basic operational mechanism of sustainability management

KEPCO has 12 action items and KPI's in economy, environment and society

### Sustainability management organization

KEPCO has been operating a Corporate Sustainability Management (CSM) organization since 2005 in order to carry out sustainability management more systematically. We appointed three external experts in the three key areas as sustainability management consultants. Sustainability management activities are supervised by the Strategic Planning Team under the Future Strategy Department, and carried out by the departments (offices) in the head office, and at locations of operation across the country.

### Development stages of sustainability management

KEPCO presents development stages in the three key areas of economy, environment and society to raise the level of sustainability management, and is doing its best to accomplish the goals in each stage.

### Sustainability management propel system

## "Global Top Green & Smart Energy Pioneer"

### Vision



### Action Plans

### Key Action Items

	Economy	Environment	Society
	<p><b>Strengthen basis for future growth</b></p> <p>Supply high quality electric power in a stable manner Provide differentiated customer services Diversify overseas business and build up capacity Facilitate managerial innovation and R&amp;D strategies</p>	<p><b>Establish carbon and green growth management</b></p> <p>Enhance an integrated environmental management system Accelerated development of green technology Increase eco-friendliness of electric power supply chain Respond to the Convention on Climate Change</p>	<p><b>Secure social leadership</b></p> <p>Strengthen "partnership in growth" Pursue social contribution activities Respect human rights and bring diversity Establish labor relations based on communication and harmony</p>



# KEPCO

“ KEPCO is actively putting all its effort to achieve its vision, Global Top Green & Smart Energy Pioneer by establishing sustainability management framework for balanced development on economic, environment, and social fields. ”

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## Mission statement of sustainability management

KEPCO is leading the electric power industry of Korea. As such we are committed to corporate social responsibility, contributing to the sustainable growth of the country, society and humanity. We hereby pledge to practice sustainability management in the areas of economy, environment, society and human resources while respecting all stakeholders.

### Economy: Continuous growth

We will secure a competitive advantage in the global market and build future growth engines based on the spirit of challenge and a creative and forward-looking way of thinking. We also enhance corporate value by maintaining a sound financial structure.

We will improve our management efficiency to the global level by constantly innovating our management autonomously.

We will preempt core technologies in the electric power industry through ongoing technological innovation, and lead the development of the global power technology.

### Environment: Eco-value creation

We will practice environmental management systematically to maximize environmental efficiency, and continue to increase energy use efficiency through proactive demand control.

We will strive to make the electric power supply chain eco-friendlier from power generation through transport to sales.

We will closely cooperate with other group companies to tackle climate change issues, thereby contributing to global environmental conservation and enhancing the environmental value for future generations

### Society: Building trust

We will conduct business fairly according to moral and ethical values, and disclose business performance faithfully to enhance managerial transparency.

We will seek to grow with all stakeholders by ensuring mutual benefits for customers, suppliers, group companies, the state, society, shareholders and employees.

We will make KEPCO a respected company that fulfills social responsibility by engaging all employees in the practice of 'Nanum' (sharing) management.

### People: People-oriented management

We will continue to raise the quality of life of all employees by building future-oriented labor relations, strengthening health and safety activities, and promoting employee welfare.

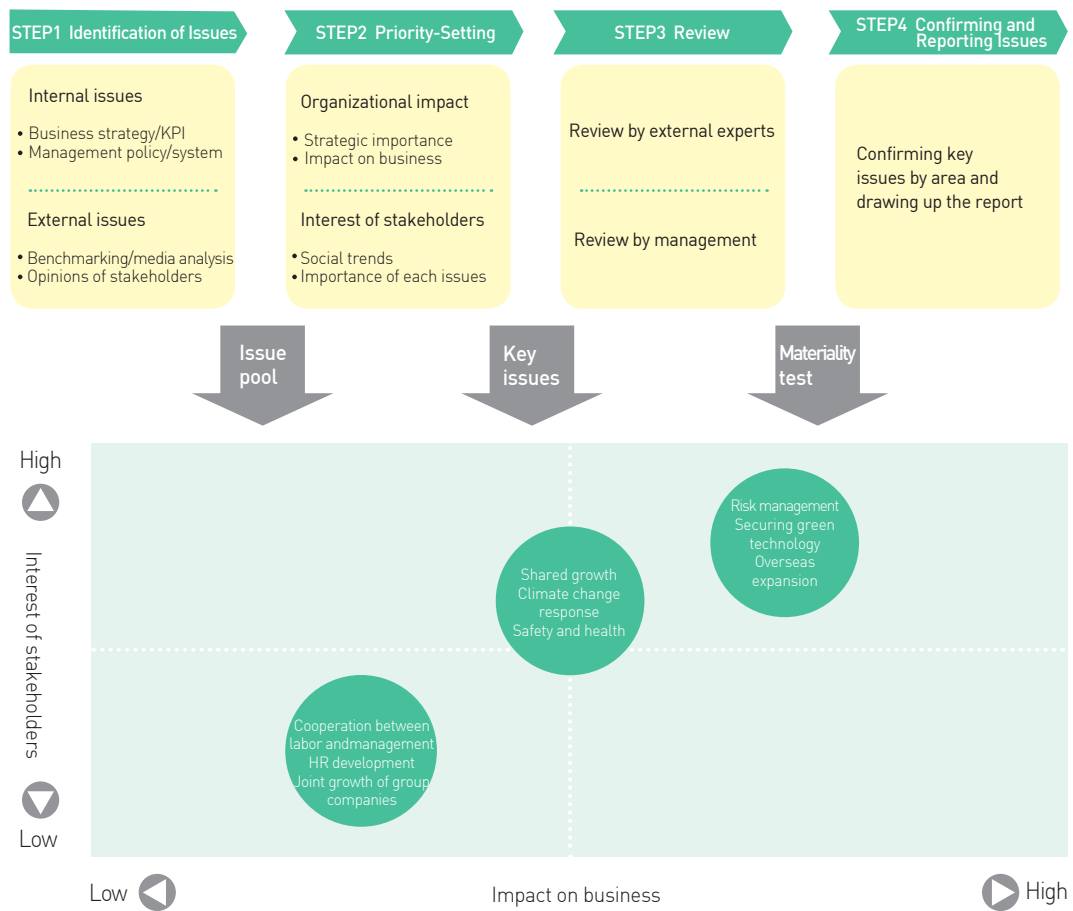
We will define our Ideal Employee and develop human resources with global capabilities to strengthen our ability to respond to the future.

We will care about human rights by respecting human rights, i.e. complying with the principles of gender equality, support of the socially vulnerable, non-discrimination, and prevention of forced labor and child labor.

# Materiality test process

## Materiality test process

To prepare this Report, KEPCO identified stakeholders' interests and their relative impact on the company. A sophisticated materiality test process was established to identify significant issues affecting the decision-making process from the economic, environmental and social point of view. The Materiality Test Process is composed of 'Identification of Issues,' 'Priority Setting,' 'Review' and 'Confirming and Reporting Issues.' According to this process, we prioritized the issues, and adopted a structured approach toward significant issues.



## Materiality test process

The key issues of sustainability management identified by KEPCO through the materiality test process are risk management in response to uncertain economic conditions, expansion of overseas business and development of overseas resources to generate growth engines from the economic point of view, and securing green technology and eco-friendly supply chain management to respond to climate change from the environmental point of view, and shared growth with SME's and cooperation between labor and management from the social point of view.

## Participation of stakeholders

KEPCO recognizes all Koreans who use electricity, the local residents, related organizations and corporations in countries where KEPCO is conducting overseas projects as its customers. The customers are categorized based on the characteristics of stakeholders into shareholders, creditors, the government, civic groups, suppliers and employees. Through various means such as the general meeting of shareholders, investment presentations, the ombudsman system, a variety of committees and VOC, they participate in decision-making and identification of key issues of sustainability management.

## Key performance indicators of sustainability management

### Key performance indicators of sustainability management

KEPCO manages key performance indicators (KPIs) in three major areas of economy, environment and society in association with the mid-to long-term strategies and management goals.

■ Key performance indicators				
Area	Key performance indicators	Performance		
		2009	2010	2011
Economy	Sales	3,945	4,342	4,551
	Overseas Sales (KRW100 million)	14,437	24,054	14,453
	Overseas Installed Capacity (MW)	3,116	3,502	3,406
	Fuel Self-Sufficiency (%)	2	5	7
	Outage Hour	15.59	15.15	12.40
	Credit rating (S&P)	A	A	A+
	R&D investment (KRW100 million)	2,256	3,211	2,427
	Industrial property rights (count/cumulative sum)	1,536	1,476	1,505
Environment	Energy consumption (TOE)	31231	29957	29265
	Water consumption (1,000 tons)	2390	3465	2908
	Waste Recycling Rate (%)	92.1	100	97
	Purchase of Environment-Friendly Products (%)	90.7	91.5	91.2
	Progress of Green Technology Development (%)	8.15	29	48
	% of underground downtown transmission cables	97.8	97.4	97.5
	% of underground distribution cables	13.8	14.3	14.7
	T/D Loss Rate (%)	4.07	3.99	3.69
	Load factor (%)	74.1	75.9	77.4
	Demand management quantity (MW)	3,487	3,203	3,248
	Renewable power portion (%)	0.34	0.39	0.4
	CDM business (count/cumulative sum)	9	13	21
	Greenhouse gas emissions (CO <sub>2</sub> -1,000 tons)	2175	2036	1249
Society	Integrity as a Public Enterprise (Points)	8.82	9.44	Exempted
	Public Corporation Customer Satisfaction (points)	95.7	98.1	98.8
	Support for SMEs (KRW100 million)	170	120	134
	Purchase from SMEs (%)	66.3	68.5	70.5
	Supplier Satisfaction (points)	94.5	95.1	95.2
	New jobs created (persons)	92	132	155
	Volunteer service (h/person)	6.5	5.6	11.3
	Industrial Accident Rate (%)	0.025	0.005	0.016
	Welfare satisfaction points	72.5	70.0	72.5
	Education and training hours (per person)	62.6	80.25	53.89
	Employment of Women (%)	20.5	42.0	25.4
Employment of Disabled Persons (%)	2.48	2.61	3	

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# Corporate governance

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## Composition and operation of the board of directors

The board of directors consists of 7 standing directors including the CEO and 8 non-standing directors. The CEO is recommended by the Nomination Committee, consisting of non-standing directors and non-government members, approved by the resolution of the Steering Committee of Public Institutions and the general shareholder's meeting, requested by the Minister of Knowledge Economy and finally, appointed by the President. The CEO's term of office is 3 years. Standing directors other than the CEO are appointed by the CEO through the resolution of the general meeting of shareholders. Among them, the standing directors, who will become audit committee members, are requested by the Minister of Strategy and Finance with the recommendation of the Nomination Committee and the resolution of the Steering Committee of Public Institutions, and appointed by the President. Chairman of the board of directors is one of senior non-standing directors appointed by the Minister of Strategy and Finance through the resolution of the Steering Committee of Public Institutions. In order to maintain the independence of the BOD, stakeholders who have special interests in the company cannot be appointed as non-standing directors. Experts in various areas in compliance with the management environment of the company will be appointed as non-standing directors so that the expertise in management is ensured. In accordance with the Act on the Management of Public Institutions, the tenure of directors other than the CEO is two years, and can be extended by one year at a time. In 2011, the BOD met 13 times to address a total of 59 agenda items. Important matters, which were not on the agenda list, were separately reported to the BOD. If necessary, the BOD can invite experts or any person concerned to listen to their opinions, and any director who has special interest in a specific agenda is not allowed to vote on the agenda. The board of directors also deliberate and vote on important management issues, such as management goals, budgets and electric charges, and important matters regarding economic, environmental and social performance are separately reported to the BOD in accordance with the Articles of Incorporation and the BOD regulations. The outstanding performance of the board of directors was selected as the best practice of non-standing directors at the workshop of non-standing directors of public institutions hosted by the Ministry of Strategy and Finance. The profiles of directors and the minutes of BOD meetings are posted in the homepage of KEPCO ([www.kepco.co.kr](http://www.kepco.co.kr)).

## Evaluation and remuneration of directors

Following consultations with the Nomination Committee, the CEO signs a pact with the Minister of Knowledge Economy with respect to management objectives and key issues to be achieved and addressed during his or her tenure. Every year, the progress made with regard to this pact is reviewed by the Performance Appraisal Board for Public Corporations, which is composed of experts from various fields. Standing directors other than the CEO are required to set management objectives and sign a pact with the CEO every year and are evaluated every year. The directors are paid under a remuneration ceiling approved by a resolution of the general meeting of shareholders. Non-standing directors are paid work operation expenses.

## Efforts to invigorate the activities of the board of directors in 2011

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### Strengthening the roles of non-standing directors by improving the BOD operating system

- Establishing a process for pre-deliberation of agenda by each stage to strengthen the agenda deliberation procedure
- Implementing the continuous management advisory system for non-standing directors' active participation in management
- Enhancing the operating performance monitoring system to evaluate operating performance and provide feedback

### Creating management performance by utilizing the expertise of non-standing directors

- Diversifying non-standing directors' participation in management
  - increasing participation in various meetings including subcommittee meetings, etc.
  - invigorating the management consulting of non-standing directors
- Implementing and operating the continuous management advisory system to increase non-standing directors' management consulting and create management performance

## Audit committee

KEPCO established the audit committee for independent audit and inspection of its business and accounting practices in August 2008. The audit committee is comprised of three auditors in total. Two or more of them are non-standing directors, and the chair is assumed by a non-standing director to ensure the independence and expertise of the committee. One of the three auditors is an accounting or financial expert in accordance with the Enforcement Decree of the Commercial Act. The audit committee held a total of 13 meetings in 2011, voted on 18 agendas including the annual audit plan for 2011, and received 13 reports for consideration. The appropriateness and performance of the auditing activities of the standing auditor are evaluated by the Performance Appraisal Board of Public Enterprises.

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## Risk management

### Building the enterprise-wide risk management response system

KEPCO establishes the "crisis management plan" every year to prevent crises like human, social and natural disaster threatening the company and respond to crises, and uses manuals for different types of crises to efficiently manage enterprise-wide crises. Crises are classified into 10 types in 4 areas, including a type that occurred in the past, a type that is likely to cause a crisis to KEPCO if it occurs, and a type that is likely to result in a potential risk. KEPCO implemented a system for eliminating or reducing risk factors, and efficiently using our resources and capabilities in case of a crisis to quickly respond to crises and minimize damages.

### Crisis warning levels and crisis response activities



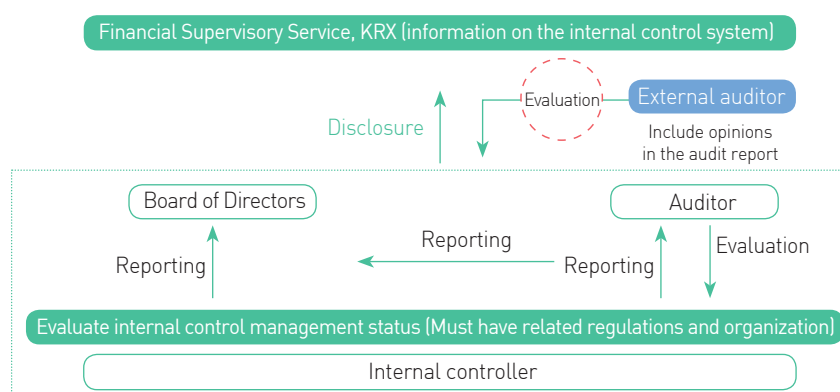
### Internal control system

To secure a high level of transparency, KEPCO has the internal control system to meet the requirements of the 'Act on External Audit of Stock Companies' in Korea and the 'Sarbanes-Oxley (SO) Act' as a company listed on the New York stock exchange. Every year we disclose the operating status of the Internal Control System to KRX and the Financial Services Commission, and submit the external auditor's internal control attestation report to SEC. KEPCO is complying with the internal control procedure to secure a global level of accounting transparency.

After the internal control system was first introduced to KEPCO including the 6 power generation companies in March 2005 pursuant to Article 2-2 of the Act on External Audit of Stock Companies, it was re-designed as the internal control system in the ERP environment in November 2006. As the International Financial Reporting Standard (IFRS) was adopted by listed companies in 2011, the control procedure was standardized to the process focused on consolidated financial information.

We are planning to continuously discover control points to perceive and prevent risks in all daily activities, and meet the needs of financial information users by improving processes, and reinforce corporate social responsibilities through transparent accounting.

### Internal Control System



# ECONOMIC PERFORMANCE

ECONOMIC

## KEPCO going global

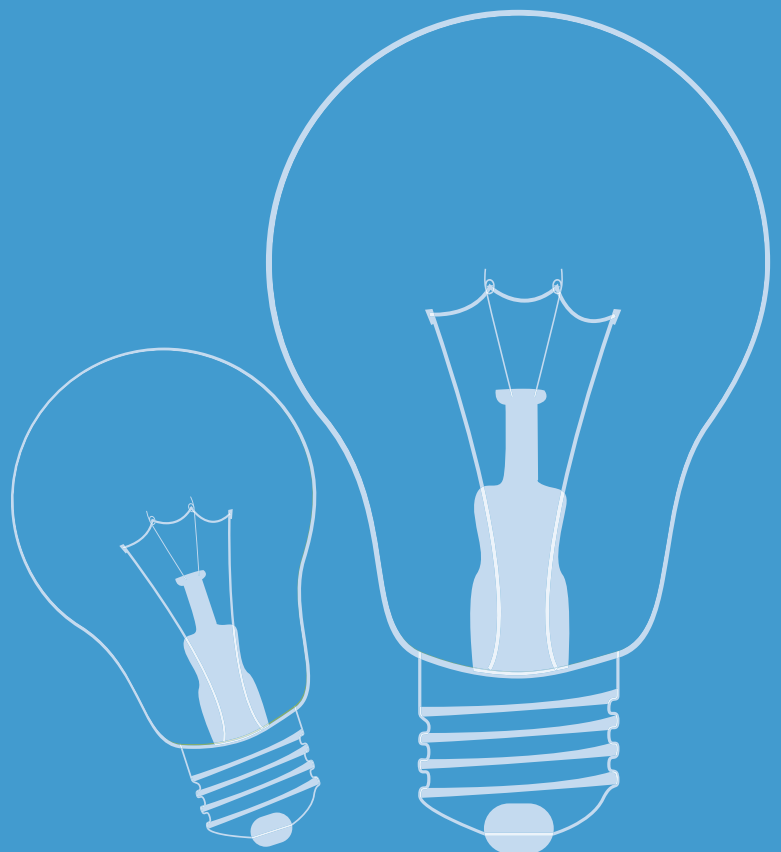
KEPCO is doing its best to stably supply electric power based on the world-best quality of electricity. Also, KEPCO is trying to overcome the limits resulting from the slowdown in the growth of domestic demands for electric power, and expand its business into overseas markets like the Middle East, Southeast Asia and South America to develop new growth engines in the global market.

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# Domestic business

## Supply and demand of power

In Korea, KEPCO established the continuous response system for perfect power supply after the September 15 Outage. As we are expecting difficulties in supply and demand of power all year round in the next 2-3 years, we will make sure there is no problem with supply and demand of power by constantly managing demands, improving the accuracy of demand prediction, and implementing a crisis response system. KEPCO has been trying to find new demand resources all year round, and running various demand management programs to suppress peak demands, and increasing the efficiency of using electricity by promoting the diffusion of high-efficiency power equipment. As a result, the load factor in 2011 was 77.6%, the highest in the world.

### Load factor trends

Classification	2009	2010	2011
Load factor (%)	74.1	75.9	77.6
Maximum demand (MW)	66,797	71,308	73,137
Average power (MW)	49,498	54,185	56,723

## Development of equipment

For stable power supply, KEPCO carried out 45 projects including the 345kV Shinchungju branch transmission lines in a timely fashion. The site selection system, in which stakeholders like local residents, regional experts and local governments participate, was applied to all transmission and transformation facility construction project, and the objectivity and transparency of the project were raised. KEPCO is doing its best to resolve civil complaints by having internal conflict management experts visit the sites where there are civil complaints. Also, to reduce the loss of existing transmission networks, increase the efficiency of facilities, and improve the reliability of electric power systems as the transmission capacity of the metropolitan area is increasing, KEPCO installed power condensers, and is in the process of constructing the 2nd Jindo-Jeju interconnection tie submarine cable and converter station facilities. KEPCO installed additional intelligent distribution management systems including 11,718 intelligent switches and implemented the wide area distribution center to increase the stability of power supply. We also improved the grounding standards through various innovative activities, and developed new technologies and new construction methods like the Compact Electric Power Distribution, and the mobile design system to reduce construction costs and improve the efficiency of distribution facility design

### power distribution facilities

Classification	1980	1990	2000	2009	2010	2011
Line length (c-km)	122,919	231,263	351,264	420,258	428,259	435,549
Supporting structure (1,000)	2,029	3,905	6,439	8,219	8,343	8,463
Transformers (1,000)	264	602	1,309	1,961	1,990	2,005

\* Underground distribution lines are 37,141c-km (including underwater lines)

### Transmission and transformation facilities

Classification		1980	1990	2000	2009	2010	2011
Transmission lines (c-km)	765kV	-	-	595	755	835	835
	345kV	2,044	4,935	7,281	8,552	8,580	8,653
	154kV~	10,641	14,497	18,706	20,950	21,261	21,762
Total		12,685	19,432	26,582	30,257	30,676	31,249
Transformer capacity (MVA)		19,108	51,685	125,700	247,786	256,318	264,373
No of substations		378	319	483	715	731	749

\* Underground transmission lines are 3,135c-km (including underwater lines)

\* The number of substations includes the switch yards (outdoor transformers within the premises of the power plant), and there are 612 unmanned substation (81.7% of them are unmanned)

## Quality of electricity

KEPCO used high-tech IT equipment such as high-frequency and thermal imaging equipment and optical binoculars to check its distribution lines, installed lightning arrestors for 154kV, and improved old transmission and transformation equipment like GIS that has been used for a long time. As a result, KEPCO has maintained a global level of electric quality. The Outage time per household was 12.4 minutes in 2011, down 18.2% from 15.15 minutes in 2010. To prevent large-scale failures, we installed cable monitoring systems in downtown underground multi-line electric ditches, implemented the integrated substation prevention and diagnostics system, and developed the alarm system for heavy equipment approaching transmission lines. Also, to prevent Outage due to the increasing number of high-voltage customers, KEPCO supports replacement of ASS, customers' facility, installed the facility diagnostics center and provided professional education for diagnostics specialists in a bid to reinforce the competencies of its technical staff. In addition, KEPCO recorded the lowest T/D loss rate of 3.69%, the best among OECD countries, thanks to integrated operation of 154kV light-load transformers, balanced operation of distribution lines, and development and propagation of high-efficiency tools and materials like low-loss electric wires and transformers.

### Comparison of the quality of electricity between countries

Classification	KEPCO	US	UK	France	Japan
Blackout per household (minutes/household/year)	12.4	120	68	73	10
T/D loss rate (%)	3.7	5.8	7.8	6.9	4.8



▶ electricity quality inspection



## | Sales |

Thanks to economic recovery, KEPCO's 2011 sales reached 455,070GWh, up 4.8% from 2010 and its revenues posted a 8.7% increase year-after-year to KRW40.6471 trillion. Despite the continuous improvement of sales and cost reduction of about KRW580.2 billion, it recorded a consolidated net loss in excess of KRW3 trillion due to poor business conditions caused by energy cost hikes. While its future business environment is expected to be unfavorable because of high energy prices, regulation of the price of electric power and greenhouse gas reduction, KEPCO will make all-out efforts to improve our business performance by streamlining our management through continuous cost-saving activities, and by operating a rational electric rates system like the Fuel Adjustment Mechanism. To establish a fair and free trading system, KEPCO is thoroughly complying with laws and regulations related to fair trading, and has never been fined or faced a non-monetary sanction. KEPCO has never donated any money to a political party, or received any subsidy from the Government.

### ■ Sales

Classification	2009	2010	2011
Volume (GWh)	394,475	434,160	455,070
Amount (KRW100 million)	329,750	373,901	406,471

## | Innovating management infrastructure |

To secure financial health, which is the biggest issue now, KEPCO is making various efforts to streamline our management, e.g. innovating engineering and purchasing & procurement, improving construction and operating processes to reduce costs, rationalizing the price of electric power, utilizing assets to create revenues, and preventing revenue loss. As a result, we reduced costs by about KRW580 billion in 2011, and we are planning on intensive management rationalization in 2012 according to changes in business conditions including fuel costs and fluctuations in exchange rates. KEPCO is engaged in corporate-wide innovative activities based on a continuous management innovation system to create an environment for internal competition, and improving management efficiency by building a challenging organizational culture. To innovate business processes for reinforcing horizontal decision-making, KEPCO began to identify problems of about 900 SOPs (standard operation procedure) in November 2011, and improved them. As a result, KEPCO reinforced the horizontal decision-making system with regard to changes in the business environment, changed the 'way we work' by ensuring that the enterprise-wide SOPs comply with ISO, and clarified the responsibilities and rights with regard to the processes of each stage.

## | Customer service |

KEPCO continues to improve its customer-oriented operating system to meet the diverse needs of customers. For starters, we introduced the K-PAS (KEPCO Power Aid Service) system and provided recovery service for customers. Also, in 2011 we improved the criteria for charging base rates for customers who renews their contracts and the interest rate calculation criteria for customers' deposits in a customer-oriented way, and raised the residents' level of satisfaction with service by having the developers of new high-voltage apartments reinforce their guarantee of electric charges. In addition, KEPCO continued to implement improvements with focus on customers, e.g. first-time credit card point payment service for public utility charges, having all credit card companies receive electric charges, and the new discount system for traditional markets to support petty merchants. KEPCO will respond to changes in the environment and reflect customer needs to improve our operations with customers at the center. As the demand for ubiquitous service is increasing due to the diffusion of smart phones, KEPCO opened the mobile cyber branch. Now customers can view how much electricity they used and file civil complaints regardless of time and place. We also created a smart phone application in December 2011 and further reinforced customer service so that customers can view and pay electric charges anywhere anytime.



▶ customer service

# Overseas business

KEPCO is trying to realize the Vision of Global Top Green & Smart Energy Pioneer, i.e. standing tall as the global best by overcoming limitations due to the sluggish growth of domestic demands for electric power, and creating new growth engines. To create new growth engines of the future, we will generate about 50% of our total sales overseas by 2025 in New Areas and New Contents, such as nuclear power plants, thermoelectric power plants, renewable energy, development of resources, and smart grids.

## | Nuclear power generation |

On December 27 2009, KEPCO won the contract for the 18.6 billion dollar nuclear power plant project from the Emirates Nuclear Energy Corporation (ENEC). Under the project, four Korean-style 1,400MW reactors (APR1400) will be built starting with No.1 reactor on May 1, 2017 ending with No.4 reactor by 2020. After the UAE nuclear deal, KEPCO entered into subcontracting agreements with group companies and private companies to successfully complete the project and build premium nuclear power plants, and designed an NPP becoming the characteristics of UAE, and embarked on making and purchasing main equipment. On March 14 2011, KEPCO held a groundbreaking ceremony at the site for UAE power plant, and started marine dredging in May 2011. We are currently constructing the infrastructure. Meanwhile, KEPCO obtained the construction permission for NPP Units No. 1 and 2 from UAE Federal Authority For Nuclear Regulation (FANR) on July 17, 2012, and began to cast concrete on July 18. We started the construction work for the main structure, and the construction work is underway without any problem.

## | Thermoelectric/renewable power generation |

Since the completion of the Philippine Malaya Thermoelectric Power Generation Project in 1995, KEPCO has been gradually expanding its business to China, UAE, Saudi Arabia and Mexico. In particular, in early 2012, KEPCO won the IPP III project from National Electric Power Company (NEPCO) of Jordan. The IPP III project is a project for constructing and operating a 573MW internal combustion thermoelectric power plant, the largest diesel power plant in the world. KEPCO became the second largest power generation company in Jordan, and firmly established itself as a global power leader in the area of thermoelectric power in 2010. KEPCO won an additional 93MW wind power project in Inner Mongolia, China in 2011, proving to the world the excellence of KEPCO in the eco-friendly wind power market. In the area of renewable energies, KEPCO is operating or constructing wind power plants with a capacity of 1,315MW in Gansusheng, Inner Mongolia, and Liaoning, China, as of the end of 2011. In addition, as of the end of 2011, we entered into an

agreement for the sale of about 800,000 tons/year of certified emission reductions, thereby preventing global warming and generating revenues worth \$9.8 million a year. As of the end of 2011, KEPCO has power generation facilities overseas with the total capacity of 13,143MW and the equity capacity of 4,939MW, and achieved KRW1,445.3 billion in overseas sales in 2011. Through our overseas sales, we are continuously improving our profitability, enhancing our global brand value, and creating new jobs by continuously penetrating overseas power generation markets together with domestic construction companies and suppliers.



▶ Award letter sign and seal

KEPCO will break away from the existing markets, i.e. the Philippines and China, and actively expand into the Middle East, South America and Africa, greatly increase the portion of wind power and photovoltaic energy that minimize carbon emissions have great growth potential, commercialize the IGCC and CGS technology for eco-friendly thermoelectric power plants, and develop hydroelectric power generation using the abundant water resources of Central and South America and Southeast Asia.

■ Sales of Overseas Project (Unit 100 million)					
Classification	2009	2010	2011	June 2012	Cumulative sum
Power generation	5,944	6,478	7,971	4,784	42,232
Resources	351	1,917	4,068	1,849	8,185
Transmission and distribution	61	28	341	457	820
Nuclear power	-	6,014	11,674	7,363	25,051
Total	6,356	14,437	24,054	14,453	76,288

## Exploration of resources

Amid an increasingly growing competition for natural resources due to fierce resource nationalism and resource-rich nations' control over resource exports, KEPCO has been very active in exploring overseas resources in order to secure stable supply of fuels and hedge against fluctuating fuel costs. For example, in 2011, KEPCO is currently operating five initiatives including the takeover of the Bylong mine in Australia, and secured 7.5 million tons of bituminous coal per year, achieving a self-sufficiency rate of 10%. When it comes to uranium, we are operating five projects including the acquisition of stakes in Canada-based Denison, and secured 160 tons of uranium per year, which is the off-take volume of the mines, achieving a self-sufficiency rate of 4%. Overseas resource explorations offer a stable supply of fuels for power generation at home and abroad, and prevent domestic electric rates from going up due to the rapid increase of the prices of resources and fuel costs. Thanks to the acquisition of shares and stakes in mines, we are generating extra profits in the form of dividends and sales commissions. KEPCO is planning to continuously raise the self-sufficiency rates of fuels and explore resources by embarking on gas projects (CNG, shale gas, etc.). To this end, KEPCO will go beyond minority ownership, and take over control of and directly operate mines. We will invest not only in Australia and Indonesia, but also in North America for bituminous coal, and we are expanding our business to Africa and Europe beyond Canada for uranium. To secure a stable supply of resources, and minimize project risks, KEPCO will make the best portfolio for each mining development stage, i.e. exploration, development and production, and for each investment area, and overcome the regional limitations of resources exploration and maximize the value of the already-developed resources we develop by making inroads into the resources trading business.

## Increasing local employment

KEPCO creates good jobs by hiring locally in overseas sites, and thus contributes to creating economic values for the countries KEPCO operates in. As of 2011, KEPCO employs 212 local residents in the Philippines, Jordan, Mexico, etc., and the ratio of local managers exceeds 40%. We have continuously worked to provide fair opportunities to local workers in terms of employment and promotion, and faithfully fulfill our corporate social responsibilities as to protection of human rights in accordance with local laws and regulations.

Wages of Local Employees and the Ratio of Local Managers in overseas sites				
Classification	Country	2009	2010	2011
Legal Minimum Wage/ Initial Wage (KRW 10 thousand/month)	Philippines	19/32	23/44	24/34
	Jordan	26/163	26/163	30/163
	Mexico	-	-	16/108
Ratio of Local Managers (%)	Philippines	43.8	47.3	51
	Jordan	11	11	41.6
	Mexico	-	-	42

## Social contributions in overseas sites

KEPCO is fulfilling its corporate social responsibilities as a global company by conducting various volunteer services, such as free medical services including eyesight recovery operations, scholarships and provision of support for communities near power plants, in countries where KEPCO has a presence (the Philippines, Jordan, Mexico, etc.). In the Philippines, KEPCO has been actively involved in a project to promote electrification in agricultural and fishing villages, a priority of the Filipino government. We divided the project into two parts: line extension (on-grid) and photovoltaic power generation (off-grid), and successfully completed the project.

Activities in the Philippines			
Classification	2009	2010	2011
Medical Service	10 times (7,162 persons)	13 times (8,596 persons)	11 times (6,608 persons)
Scholarship	51 times (11,470 students)	66 times (12,888 students)	43 times (3,501 students)
Support for communities near Power Plants	173 times (22,135 persons)	285 times (28,871 persons)	187 times (21,197 persons)

Project for Promotion of Electrification in Agricultural and Fishing Villages in the Philippines	
Classification	Result
On-Grid (Line extension)	484 projects completed (January 2011)
Off-Grid (Photovoltaic power generation)	270 projects completed (January 2011)

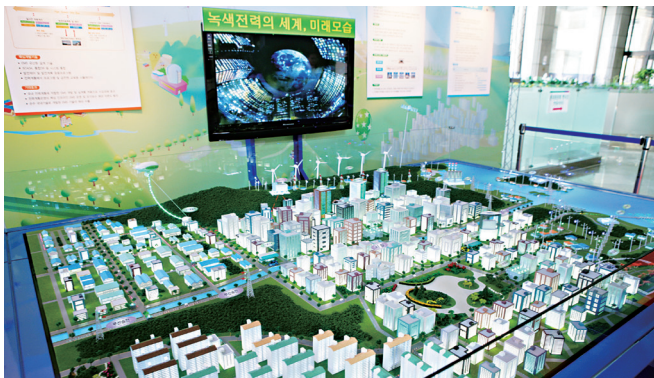
Eyesight Recovery Operations					
Classification	Philippines	Mexico	Jordan	Vietnam	
2011	2	2	2	2	
2012 (planned)	2	6	6	3	
Classification	China	Nigeria	Indonesia	South Africa	Total
2011	2	0	0	0	10
2012 (planned)	6	2	4	3	32

Local employment (Unit: persons)			
Classification	2009	2010	2011
Philippines	277	305	188
Jordan	9	11	9
Mexico	-	-	15

## | Smart Grid |

KEPCO is focused on smart grid projects to reduce greenhouse gas (GHG) emissions, improve energy efficiency and promote the use of renewable energy. "Smart grid" refers to an electric power grid that incorporates information & communication technologies (ICT) to make the power grid more intelligent and advanced, and thus provides high-quality electric power service and maximize the efficiency of energy use. Korea was named a leader in the smart grid area at the Major Economies Forum on Energy and Climate held in Italy in July 2009. At the national level, ground was broken for a smart grid test-bed on Jeju Island in August 2009, and a national roadmap for smart grids was announced in January 2010. The □Act on Promotion of the Construction and Use of Intelligent Power Grid□ was enacted and enforced in November 2011, and KEPCO established the first intelligent power grid master plan in June 2012, thereby laying the legal and institutional foundation. KEPCO has participated in all five areas of the Jeju smart grid test-bed project (December 2012–May 2013), and installed smart meters, intelligent transmission and distribution systems, and digital converters, and is conducting demonstration projects, e.g. the electric car charging service payment and operating system, and power system interconnection with renewable energy sources

KEPCO is concentrating its energies on five central pillars: reduction in peak demand, load leveling, smart power grid, CO2-reducing renewable energies, standardization of a smart grid and establishment of an information protection system and creation of future growth engines. KEPCO has outstanding technologies in the smart grid such as transmission/distribution automation technology. Coupled with its technical prowess, KEPCO combined the smart grid component technologies and business models, and developed customized package products for different regions and countries to promote overseas projects and marketing activities. KEPCO aims to secure a foothold based on its smart grid test-bed project by 2013, establish the broad smart grid by 2020 and build the world's first state-level smart grid by 2030.



▶ Smart Grid Model

## | Global super grid business |

KEPCO is preparing for a mid-to long-term global super grid project to resolve the current issues of the electric power system like domestic electric power supply and demand, and to create new growth engines by exporting electric power. It is a large-scale project involving Russia, China and Japan as well as Korea that is expected to enhance the operational efficiency of the electric power supply and demand, promote development of electric power resources like gas and hydroelectric power generation, and develop renewable energies of the future like wind power and photovoltaic power generation

## | Jeju smart grid test-bed project |

### 5 areas of the project

01

#### Smart Power Grid

Make transmission and distribution lines smart  
Build a real-time wide-area monitoring system

02

#### Smart Place

Build AMI that allows two-way data exchange  
Lay the foundation for energy efficiency based on demand response

03

#### Smart Transport

Build EV charging infrastructure  
Build a central control system

04

#### Smart Renewable

Connect renewable energy to power grid  
Validate Energy Storage Facilities Connected to Power Grid

05

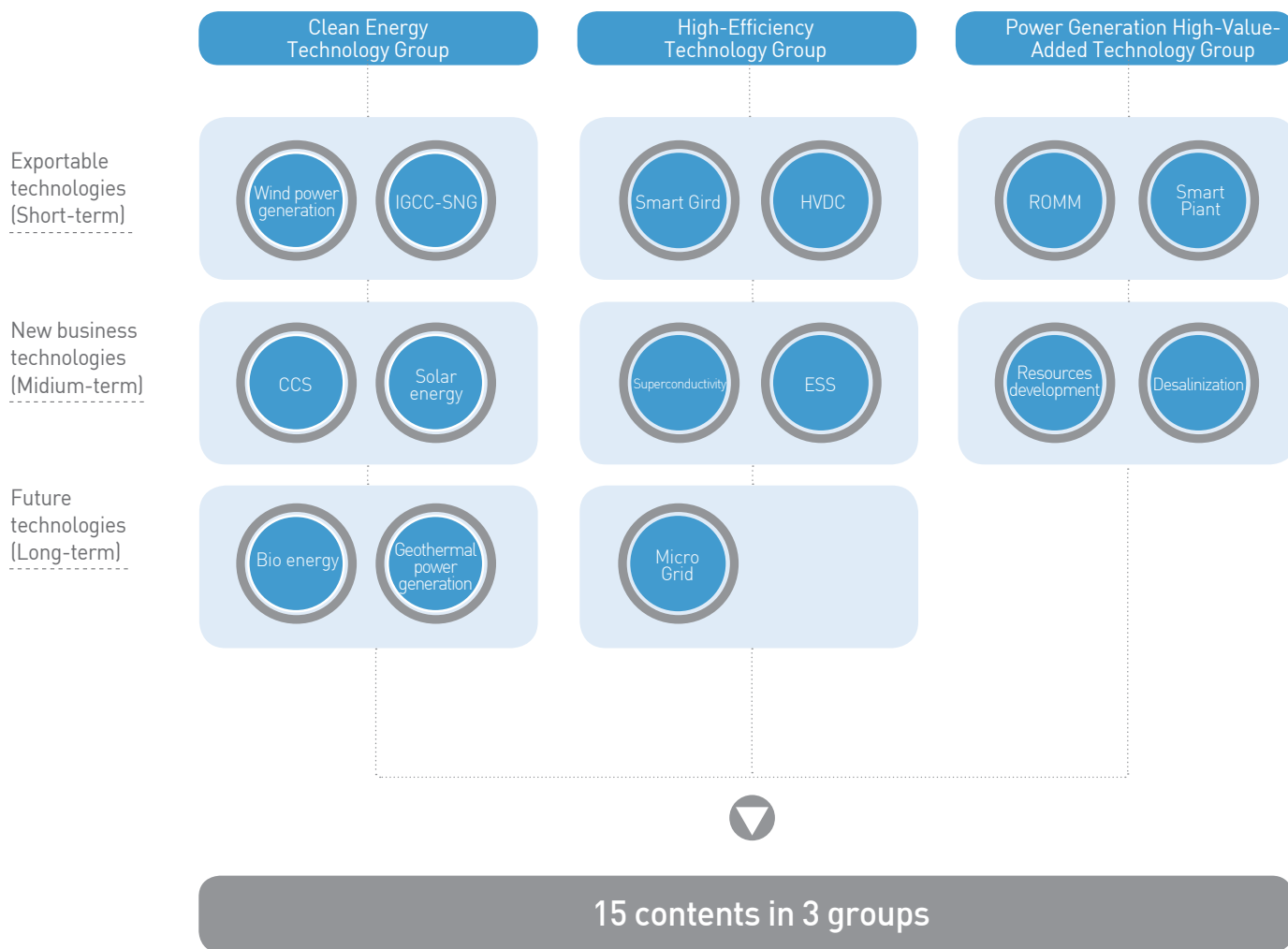
#### Smart Elec. Service

Develop various price plans for the establishment of electric power service system  
Develop service models

# Creating future growth engines

## | Developing Green & Smart technology |

KEPCO is developing low-carbon green technology to create growth engines of the future, and investing in R&D every year to improve the technological competitiveness of electric power facilities by developing core technologies. In 2011 KEPCO invested KRW242.7 billion in R&D, and developed green technologies and operating technologies customized to each business area to reinforce technological competitiveness, and built the research infrastructure by expanding research facilities and introducing the system for joint utilization of information resources to group companies. In September 2012, to find new growth engines and expand global operations, we established the strategy for technology development. We selected 15 contents in three areas, i.e. the Clean Energy Technology Group, the High-Efficiency Technology Group, and the Power Generation High-Value-Added Technology Group, and we will secure our own Green & Smart technological competencies based on the strategy for securing technologies to become a global Top Player.



# ENVIROMENRAL PERFORMANCE

ENVIROMENRAL



# Environmental management system

## | Integrated environmental management system |

In October 2007, KEPCO established the "Mid- to Long-term Environmental Management Master Plan" to conduct environmental management in a more systematic way in pursuit of sustainable development. The mid- to long-term goal of our environmental management is to enhance environmental management capacity so as to become one of the global top 5 in green & smart energy. To this end, we have prepared strategies and action plans in four areas according to the Environmental Management Master Plan.

Environmental vision

Global Energy Group Leading the Creation of Environmental Value

Goals

ECO GLOBAL TOP 5

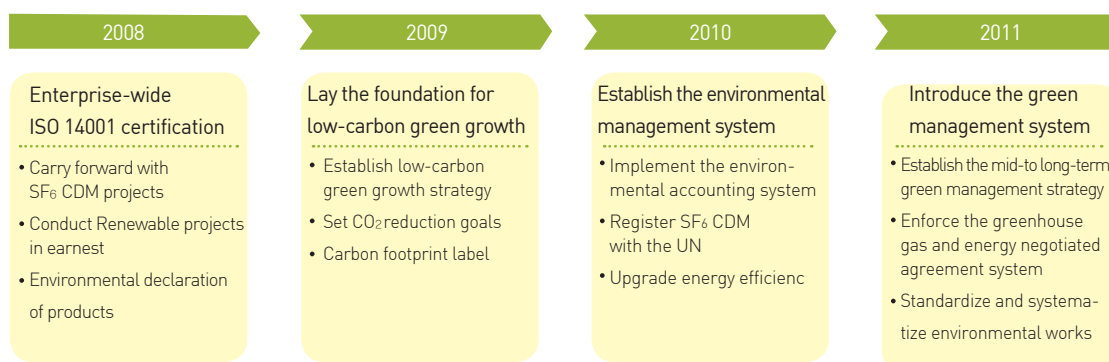
Strategies

Action plans

Action items



Roadmap for integrated environmental management



## | Certification of the environmental management system |

KEPCO obtained the Environmental Management System (ISO14001) Certification for sites in 2007 and then for all sites in 2008. In 2010, KEPCO expanded the certification to nuclear power plant construction and operational management areas, and maintained certification by passing the ex-post audit in 2011, thereby leading eco-friendly management.



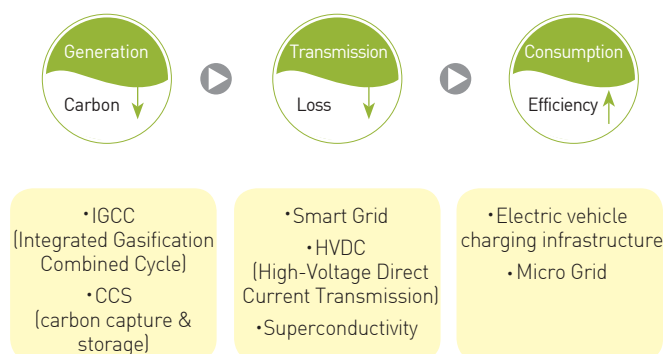
# Developing eco-friendly power technology

## Developing eco-friendly power technology

To lead low-carbon green growth in response to climate change, KEPCO is trying to develop eco-friendly green technology applicable across the power supply and consumption value chain. The basic direction of the generation phase is reduction of carbon emissions, and that of the transmission phase is reduction of loss, and that of the consumption phase is improvement of efficiency. KEPCO is trying to develop and commercialize various green technologies like coal gasification power generation technology. To this end, KEPCO is investing heavily in development of green and eco-friendly technologies, and intensively managing the progress of development of core technologies. In 2011 the progress of green technology development was 48% as compared to 2020. KEPCO successfully developed a world-best carbon dioxide absorbent, and became the second in the world to successfully operate 22.9kV superconducting cables and Fault Current Limiters in real systems.

KEPCO will create environmental values early by commercializing the technologies we develop, and continuously identify and develop new green technologies like offshore wind power generation by periodically rolling our technology development strategy.

## Basic directions of eco-friendly green technology development



Key outcomes of green technology development in 2011	
Technology name	Key outcomes of 2011
IGCC (Integrated Gas Combined Cycle)	Reduced the commercialization period by 8 years by establishing a joint venture that adopted the core technology (gasifier)
CCS (carbon capture & storage)	Developed the world-best post-combustion absorbent (wet type) 0.1MW Test Bed 1,000 hour continuous operation succeeded.
Smart Grid	The Jeju Smart Grid test-bed is successfully running. Developed an IT-based large-capacity power transmission technology (STATCOM)
HVDC (High-Voltage Direct Current Transmission)	Implemented an 80kV field investigation system and tested the conversion system design
Superconducting	Became the second in the world to operate 22.9kV superconducting cables/Fault Current Limiters in real systems
Electric Vehicle Charging Infrastructure	Developed 6 commercializable charging systems and integrated technical specifications Developed the charger performance tester
Micro Grid	Completed the construction of the 500kW wind power generators for the Gapado test-bed project



Inner Mongolia a wind power plant

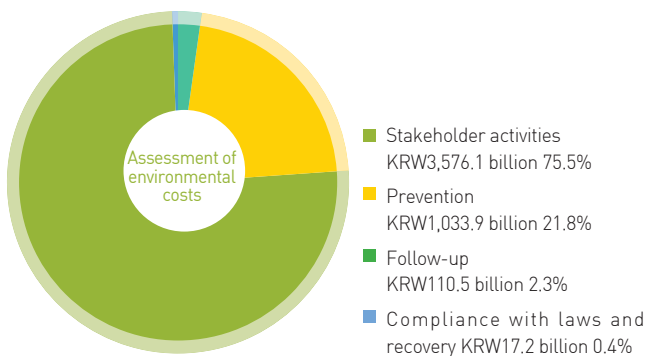
# Enhancing environmental efficiency

KEPCO conducted powerful energy-saving activities in 2011 in response to the Government's energy-saving policies.

To raise employees' awareness of a frugal mindset, KEPCO operated the energy diet period in summer and winter to intensively publicize energy-saving, established the eco-life style, e.g. following the room temperature guideline, and laid the foundation for energy use rationalization by establishing improvement plans through energy diagnosis and increasing the supply of energy-saving equipment. KEPCO will replace 30% of all lamps with LED by 2012. For starters, we replaced all the typical low-efficiency lamps, i.e. incandescent lamps and halogen lamps, by 2011, and we are replacing fluorescent lamps, which account for the majority of office lighting, with LED according to our annual plan.

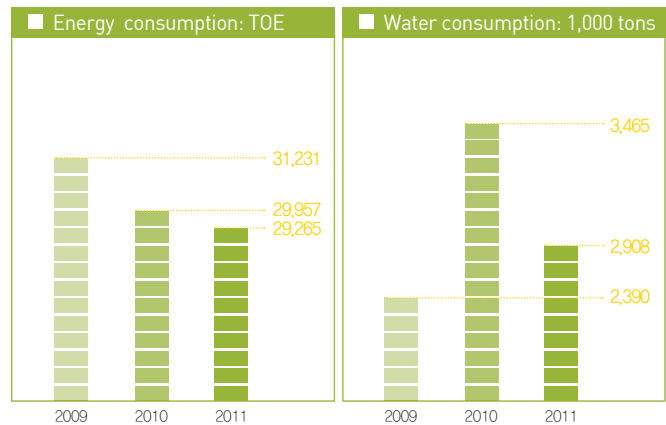
## Assessment of environmental costs

In 2011, total environmental spending calculated in accordance with KEPCO's environmental accounting system was KRW 4,731.8 billion, equivalent to 10.9% of total sales. Much of the outlay was intensively invested in the procurement of construction of eco-friendly power facilities and renewable energy equipment. The environmental accounting system will be used strategically to promptly provide the top management and stakeholders with environmental accounting data in the decision-making process and further improve environmental value.



## Reduction of energy and water consumption

In 2011, KEPCO consumed 29,265TOE of energy and 2,908,000 tons of water in total. Thanks to the wider use of high-efficiency equipment and more efficient use of facilities, our energy consumption was reduced by 692TOE when the reduction goal was 1.5% (588TOE) of the average consumption of 2007-2009, and water consumption was reduced by 557,000 tons when the reduction goal was 5% (146,000 tons) of the average consumption of 2009-2011, and as water was discharged through the sewerage, no water was reused.



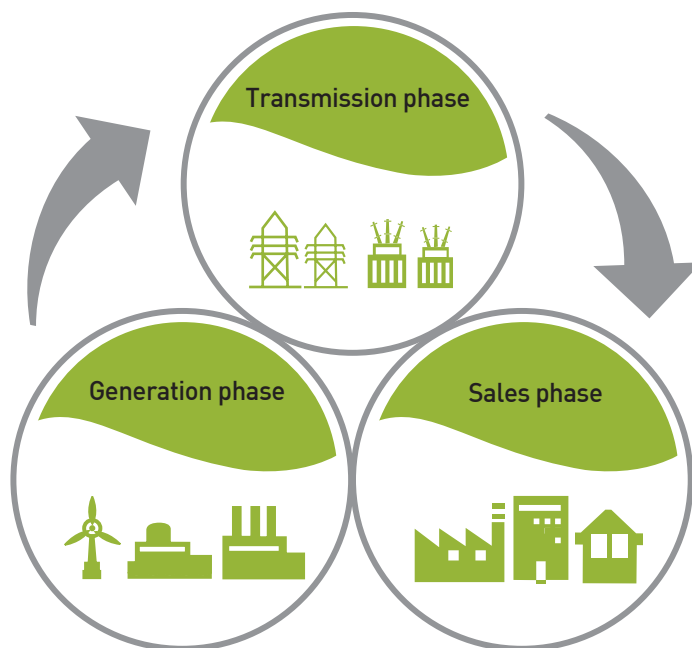
Energy & water saving efforts in 2011	
Strengthen Energy Conservation System	<ul style="list-style-type: none"> <li>Reinforce the activities of Energy Conservation Committee (chaired by CTO)</li> <li>Designate 'Energy Guardian' to strictly control the room temperature in summer and winter</li> </ul>
Enhance Energy Use Efficiency	<ul style="list-style-type: none"> <li>Achieve reduction target through Total Energy Consumption Volume System (less than average for most recent 2 years)</li> <li>Increase use of high-efficiency equipment: total 67.02MW</li> <li>Diffusion of energy-saving office appliances: 7,436</li> </ul>
Raise Energy Conservation Awareness	<ul style="list-style-type: none"> <li>Hold energy saving contests and conduct energy-saving campaigns</li> <li>Provide education to share best practices of energy saving to all sites</li> <li>Have energy officers participate in professional training</li> </ul>

## Use of eco-friendly company vehicles

KEPCO are making efforts to reduce the environmental pollution of company vehicles. In 2010 the vehicle fleet totaled 3,174, up 21 vehicles from the previous year. Of these, 1,738 were passenger cars, and 1,419 (81.6%) of these cars were eco-friendly models such as subcompact cars and hybrid vehicles. At least 80% of all newly purchased vehicles will be subcompact or hybrid cars. Fuel consumption for company vehicles in 2010 was 5,813,000 liters, and fuel efficiency was 7.14 km/L.

Proportion of eco-friendly cars among passenger cars for business use			
Classification	2009	2010	2011
Passenger cars	1,742	1,738	1,743
Subcompact cars	1,359	1,359	1,367
Hybrid cars	60	60	60
Total eco-friendly cars	1,419	1,419	1,427
Proportion of eco-friendly cars (%)	81.5	81.6	81.9

# Eco-friendly power supply chain



**Generation phase**

Encourage eco-friendly management at GENCOs

- Establish an Integrated Environmental Management System
- Construct and Operate Facilities in Harmony with Local Communities
- Improve Environmental Efficiency

**Transmission phase**

Increase the construction of eco-friendly facilities

- Secure the Objectivity and Transparency of Site Selection Process
- Expand the Construction of Eco-Friendly Facilities in Harmony with Local Communities

Strengthen operation and management of facilities

- Lower T/D Loss
- Manage Electromagnetic Field and Preserve the Ecosystem

**Sales phase**

Manage power supply and demand more reasonably

- Ensure efficient control of peak demand
- Improve the Efficiency of Electricity Use

## | HSE policy |

As a leader of the global electric power industry, KEPCO promises to achieve the highest level in safety, health and environment (HSE), and faithfully practice the following to fulfill our corporate social responsibility of protecting the happiness and well-being of individuals and society.

**First** We will give top priority to HSE in our business activities, and implement, operate and continuously improve a global-level HSE system.

**Second** We will comply with HSE laws and regulations, identify and eliminate risk factors in all phases of the electric power industry, and take the lead in preventing and effectively responding to environmental pollution by conducting environmental impact assessment.

**Third** We will reinforce our partnership in HSE with all our stakeholders by actively communicating with them, and reflect it in our management activities.

**Fourth** We will establish goals and detailed plans, and continuously provide education and training to enhance the HSE competency and awareness of all employees and subcontractors and motivate them.

# Eco-friendly power supply chain

## Generation phase

KEPCO and GENCOs established a close cooperative system among the generation, transmission and distribution sectors to make the electric power supply chain more eco-friendly

### - Environmental investments and expenses

The GENCOs acquired the ISO14001 certification for all sites in 2009 and their environmental investments and expenses totaled approximately KRW 478.6 billion in 2011.

■ GENCO's environmental investments and expenses (Unit: KRW100 million)						
Company	KHNP	KOSEP	KOMIPO	Western Power	KOSPO	KEWP
Amount	204	523	737	1578	253	1491

### - Construction and operation of power generation facilities in harmony with local communities

The GENCOs conduct environmental impact assessments with regard to how the construction or expansion of power plants will impact the natural environment and traffic. They also conduct post environmental impact assessments for five years after construction is complete, reporting the results to the government every year.

### - Improved environmental efficiency

The GENCOs expanded the use of clean energy sources and operating systems to reduce emissions of SOx, NOx and dust from the power generation process. The GENCOs have facilities that physically and chemically treat wastewater for reuse or discharge. Moreover, 100% of the desulfurized gypsum generated from coal-fired power plants was reused in cement. Efforts like these help encourage recycling in society. In 2010, GENCOs installed de-NOx, de-SOx and dust collecting facilities on every generator to minimize air pollution. Therefore, CO<sub>2</sub> emissions declined for two years in a row as compared to 2009, and the chemical oxygen demand (COD) and suspended solids (SS) decreased by 9.5% and 18.5% respectively.

■ CO <sub>2</sub> emissions (kg/MWh)	
2009	472
2010	463
2011	464

### - Air pollutant emissions

■ SO <sub>x</sub> (g/MWh)	
2009	168
2010	159
2011	148

■ NO <sub>x</sub> (g/MWh)	
2009	308
2010	295
2011	284

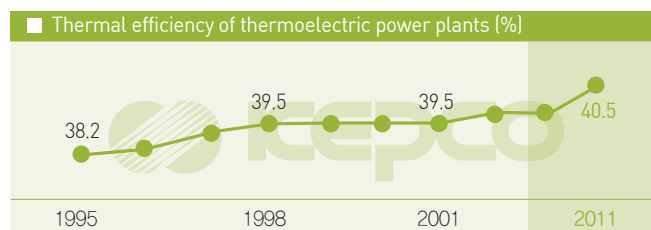
■ Dust (g/MWh)	
2009	8
2010	8
2011	8

### - Water pollutant emissions

■ COD (g/MWh)	
2009	0.160
2010	0.137
2011	0.124

■ SS (g/MWh)	
2009	0.068
2010	0.058
2011	0.047

### - Thermal efficiency of thermoelectric power plants (%)



## | Transmission phase |

To stably supply electric power, KEPCO constructed transmission and distribution facilities necessary in a timely fashion, and runs them in an effective way. Also, KEPCO is making various efforts to make the electric power transmission eco-friendlier, e.g. ensuring the objectivity and transparency of site selection for electric facilities in order to transmit electricity in an eco-friendly manner, construction of more eco-friendly electric power facilities in harmony with local communities, reduction of the T/D loss rate, protection of the ecosystem, and management of the magnetic field.

### - Objective and transparent site selection process

To increase the objectivity and transparency of site selection for construction of transmission & transformation facilities, KEPCO applied more sophisticated scientific techniques, and in January 2009, the resident site selection system began to be applied to all construction projects. As the Site Selection Committee, consisting of local residents, the local government, the local council and experts, selects sites, objectivity and transparency can be secured. In addition, starting in 2008, a presentation for residents prior to the start of construction, which used to be required for projects subject to environmental impact assessments, should now be given to all projects. The "Open House" system was implemented in September 2010. This system is designed to give additional presentations to those residents who do not attend the first presentation.

### - Eco-friendly construction of electric power facilities

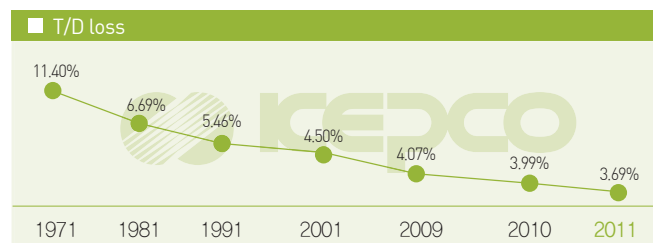
KEPCO continuously expands construction of eco-friendly electric power facilities by developing eco-friendly materials and construction methods in harmony with the surrounding environment. By increasing the use of good-looking tubular steel poles when installing pylons, applying the Spacer Wiring Method and Semi-underground Method, we were able to contribute to beautification of the environment thanks to reduction of occupied areas, and improve the pedestrian environment. To prevent GHG emissions, KEPCO developed and applied the epoxy mold insulated switch to replace the existing SF6 gas. In addition, we've tried to revise laws and regulations related to installation of electric power facilities, and minimized the time it takes to excavate the road by reducing the depth of underground pipes. We enacted a law requiring space inside structures on the ground for installing ground equipment. By doing so, we were able to minimize obstructions to walking. In addition, we enacted a law for burying aerial communication lines when installing underground distribution lines and laid the foundation for radically beautifying the urban landscape.

■ Downtown underground transmission lines [%]	
2008	97.4
2009	97.7
2010	97.4
2011	97.8

■ Underground distribution facilities [%]	
2008	13.3
2009	13.8
2010	14.3
2011	14.7

### - Efforts to lower T/D loss

By developing and distributing high efficiency devices and equipment such as low loss wiring and transmitters and by maximizing capacity of transmission and distribution lines, we are doing our part to reduce the loss rate of electric power. As a result, we reduced the loss rate of transmission and distribution to 3.69%, the lowest in the world, in 2011 and suppressed the need for construction of additional power generation facilities, while at the same time contributing indirectly to reduction of GHG emissions.



### - Electromagnetic field management and eco-system protection

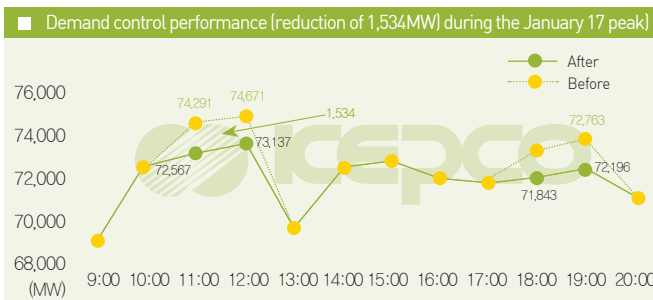
As the electromagnetic field generated in electric facilities has a very low frequency of 60Hz, it does not deliver electricity far away, and electric power is sharply lower as the distance increases. To safely operate electric power facilities, KEPCO ensures that the value remains very low, less than about 1/6 of the domestic standard. In addition, to alleviate the ambiguous conflicts and concern about the safety of the electromagnetic field, and to provide accurate information for the people, we have a webpage ([www.emfsafe.kr](http://www.emfsafe.kr)) about electromagnetic fields and the electromagnetic field experience hall, and offer the electromagnetic field measurement service. We are also continuously conducting researches for scientific management of electromagnetic fields, and collecting opinions through diverse channels. The total area of electric power facilities in ecosystem protection areas is 48km<sup>2</sup>, and we banned the construction of new transmission lines in designated ecosystem protection areas to help maintain bio-diversity.

# Eco-friendly power supply chain

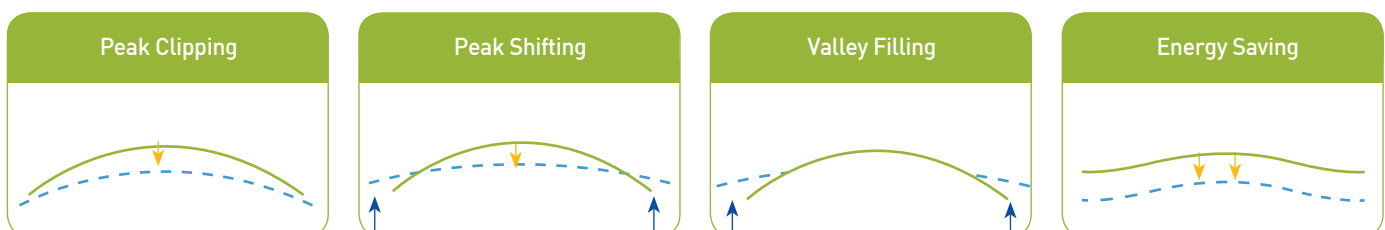
## | Sales phase |

KEPCO has been committed to the stable supply of electric power through proactive and systematic demand control and endeavored to raise the efficiency of equipment, contributing to the nation's energy conservation policies. We overcame the unprecedented cold in January and February 2011, and stably supplied electric power. Particularly, in January when the winter peak was updated three times, KEPCO implemented the weekly forecast demand control system in a timely fashion, and reduced the load by 1,534MW during the January 17 peak.

Major support programs for power demand control		
Classification	Programs	Description
Load control support programs	Demand control during the fixed period of time	KRW560-680/kW adjusted
	Weekly forecast demand control	KRW540-900/kW adjusted
	Emergency autonomous saving	KRW3,000/kw saved
	Ice storage cooling system	KRW350,000-480,000/ kW reduced
	Direct load control	Base subsidy (KRW 500/kW) + Control Subsidy
	Remote control of heating and cooling facilities inside the building	Installation cost support (ceiling KRW10 million)
Efficiency improvement support programs	Peak demand controller	control support KRW1.5 million per unit
	High-efficiency lighting device	KRW 5,100-13,600/unit installed
	High-efficiency inverter	KRW120,000-5.98 million by capacity
	High-efficiency freezer	KRW140,000/kW by capacity



## - Types of demand control



## - Efficient management of peak demand

We designated 10 days for controlling the demand for electricity when the demand for electricity is concentrated, and raised the demand control target from 2000 → 3,000MW in provision against the December emergency. To increase the number of participating customers, we introduced the 'demand control customer management program' and appointed 2,382 employees. As a result, we secured 3,400MW of resources for use in emergency, upgraded the transformer voltage adjustment stage to proactively respond to an emergency, and built the real-time demand control performance monitoring system to make it possible to monitor poor-performing sites and customers. Also, we diffused the system for remote control of building air-conditioning and the peak management system to efficiently manage power demands, thereby suppressing a total of 3,337MW of peak loads.

### Efforts to suppress peaks in 2011

- Expand demand resources and reinforcement control**
  - Secured 2,000MW in new resources by introducing the 'power-saving regulation' or winter
  - Secured 3,000MW of resources by improving the weekly forecast system [subsidy ceiling 110% → 120%, 5% more for consecutive implementation]
  - Established the plan to pilot-operate the emergency generators
- Expand the cooling demand management business and develop technology**
  - Diffused ice storage systems and peak power management systems: 80MW
  - Building air-conditioner remote control system
  - Laid the foundation for diffusion: 3MW
- Reinforce the supply and demand system in response to emergencies**
  - Improved and implemented the system for better execution
  - Increased the subsidy for direct load control and implemented the emergency autonomous power saving
  - Implemented the "demand control customer management program"
  - Appointed managers for customers with long-term agreements (2,382)
- Conduct PR to induce the general public to reduce power consumption**
  - Conducted PR to increase participation in demand control and raise awareness
  - Held the industry-university-research institute conference (June) for targets of the electric power demand control
  - Entered into an MOU for terrestrial broadcasting with subtitles and carried out a simulation drill [3 times]

## - Higher efficiency of electricity use

Higher efficiency of electricity use As part of the national efforts to achieve low-carbon green growth, KEPCO has been trying to expand the use of new high-efficiency equipment such as LED lighting. In 2010, we started to introduce LED lighting and LED emergency lighting and tried to develop new programs like expansion of the intelligent lighting auto-control system. We also strengthened our target marketing to integrate eco-friendly high-efficient devices in the design from the early stage of construction based on closer relationships with public institutions related to the construction industry. With the wider use of high-efficiency devices, we reduced power consumption by 378,613MWh. In the future, we will continue to flexibly operate the demand control in connection with the electricity reserve, and establish a web-based system for regular demand control, and diffuse more eco-friendly high-efficiency equipment. We will remain committed to continuously improving the efficiency of electricity use.

### Efforts to improve the efficiency of electricity use in 2011

Increased use of high-efficiency LED

- LED lighting: reduced 15,064MWh (diffused 4.5MW)
- Efforts to diffuse new growth green technology LED
- Intelligent lighting auto-control system: reduced 30%

Reflected the market penetration rate and technology development level

- Stopped supporting stabilizers/motors that reached maturity in the market
- Improved the standard and procedure for supporting high-efficiency inverters to expand the distribution of inverters (added the maximum frequency, and standardized capacity standards)



▶ SinTaebaek transmission tower

# Recycling of resources and management of hazardous substances

## | Promoting the recycling of resources |

To proactively respond to domestic and overseas environmental regulations, and fulfill its corporate social responsibility for preserving the environment by reducing waste and preventing pollution, KEPCO has been committed to resource recycling. Most waste materials are from the transmission and distribution sector, and include concrete power poles, transmission towers, insulators and electric cables. As they are highly valuable as resources, we are recycling 97% of them. We will continue to find new ways to recycle waste equipment and materials and increase the number of recyclable items.

### ■ Total material usage

Classification (ton)	2009	2010	2011
Concrete	494,809	432,196	417,324
Metal	83,221	62,907	54,147
Ceramic	2,497	1,816	2,130
Electric cables	36,428	30,811	25,983
Other	5,536	8,804	4,999
Total	622,491	536,534	504,583

### ■ Waste generated and recycled by type (2011)

Classification (ton)	Volume (tons)	Recycled (tons)	% recycled
Concrete	183,213	175,885	96
Metal	35,191	35,191	100
Ceramic	6,503	6,053	100
Electric cables	21,688	21,688	100
Other	536	536	100
Total	246,681	239,353	97

## | Purchasing green products |

KEPCO purchases a great deal of eco-friendly products. In 2011, we purchased KRW 7.4 billion worth of eco-friendly products, accounting for 91.2% of total related supplies. We are planning to increase green purchasing by adding more green products to the pre-qualification standards.

### ■ Purchase of green products(KRW100 million, %)

Classification	Total purchase	Green purchase	%
2009	7,073,982	6,418,303	90.73%
2010	7,856,241	7,203,788	91.70%
2011	8,078,445	7,365,203	91.17%

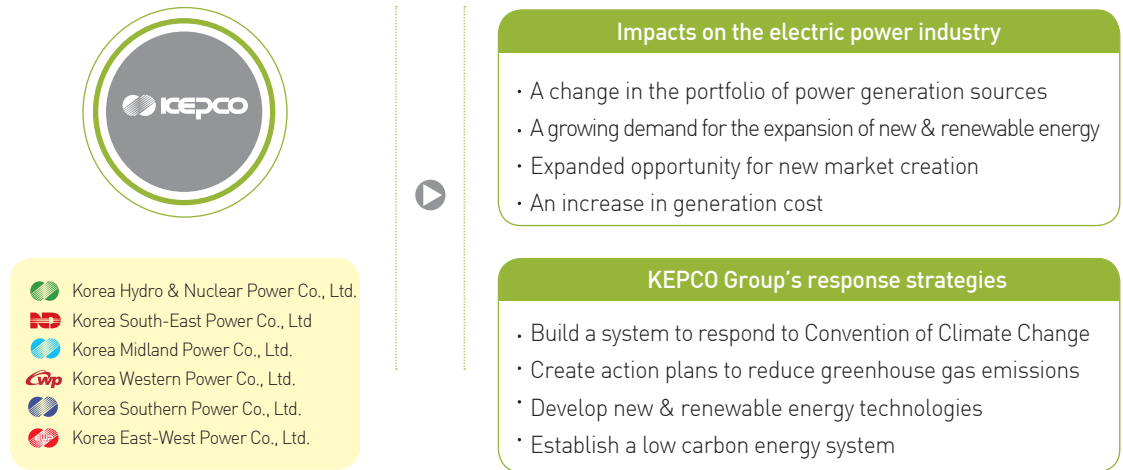
## | Control of PCBs |

KEPCO formed a dedicated team to eradicate PCBs (Poly Chlorinated Biphenyls), and handled the backlog of waste transformers early, and established a system for stable control of PCBs. By 2011 we analyzed 574,051 transformers, which account for 98.9% of total 580,356 transformers to be analyzed. We are now in the process of analyzing the remaining 6,305 transformers. We disposed of 174,543 transformers, which account for 98.1% of total 177,914 transformers with more than 2ppm of PCBs, and we are in the process of handling the remaining 1,756 transformers. We will safely manage PCBs thoroughly in all processes including the removal, storage and analysis to disposal and sale of transformers, and continue to develop new technologies to dispose of PCBs economically and stably.

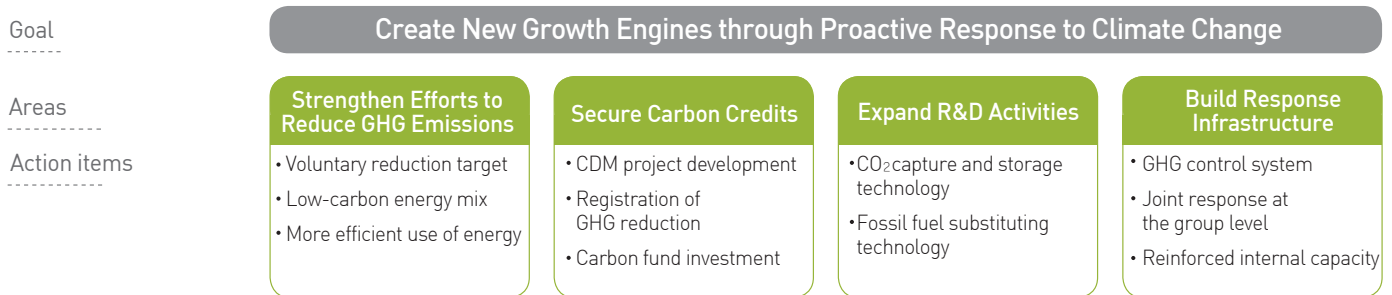


# Response to the United Nations Framework Convention on Climate Change

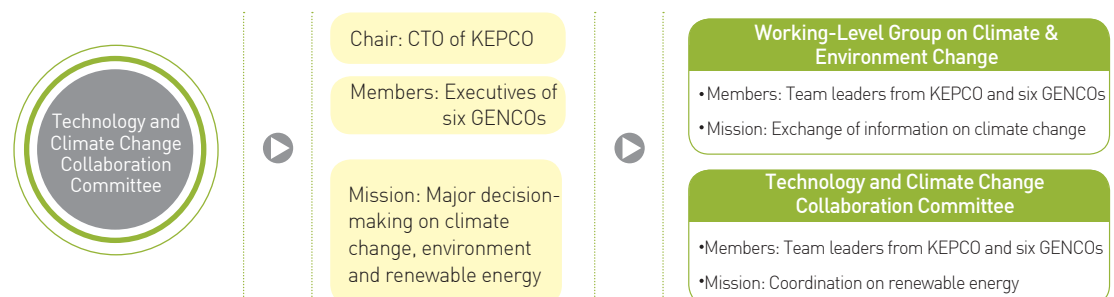
## - Directions of responding to the Convention on Climate Change



## - Mechanism to respond to climate change



## - Organization of the Technology and Climate Change Collaboration Committee



## Reinforcing joint responses of the group companies

When the Kyoto Protocol took effect in February 2005, Korea was categorized as a non-Annex 1 country. However, Korea can now be included among the Annex 1 countries under the post Kyoto climate regime, which becomes effective in 2013. The electric power industry accounted for approximately 29% of CO<sub>2</sub> emissions. If Korea is obliged to reduce GHG emissions, it will have a huge impact on KEPCO operations. Against this backdrop, KEPCO and the six GENCOs are regarding the change as a new opportunity as well as an operational risk, and thus they are striving further to ensure effective response. KEPCO and the GENCOs re-organized and expanded the existing Climate Change Collaboration Committee to form the Technology & Climate Change Collaboration Committee in June 2008. This is part of the efforts to be proactive in preserving the earth's environment and establishing a sustainable energy system in line with a changing energy paradigm. The Committee is chaired by the CTO of KEPCO and the executives of the GENCOs serve as committee members. Two working-level groups on climate and environment change, and renewable energy respectively are in place under the Committee. The RPS (Renewable Portfolio Standard) system, which goes into effect in 2012, is a system that makes it mandatory for power generation companies with more than a certain installed capacity to supply more than a certain quantity of power generation with electricity produced using renewable energy. The RES (renewable electricity standard) for 2012 is 2%, and the RPS cost is estimated to be about KRW188.7 billion, and the RES is expected to rise to 5% in 2017 and 10% in 2022.

Joint efforts of group companies to respond to climate change	
Joint Response	<ul style="list-style-type: none"> <li>Completed the validation of GHG inventory</li> <li>Built an on-line system to control GHG emissions at group companies</li> <li>Provided working-level education on the carbon market and CERs (certified emission reductions) at home and abroad</li> </ul>
Future Plans	<ul style="list-style-type: none"> <li>Develop technologies related to eco-friendly clean power generation, renewable energy and improvement of transmission and distribution facilities</li> <li>Analyze the impact of changes in regulation of the GHG emission trading system, etc.</li> </ul>

## CDM project

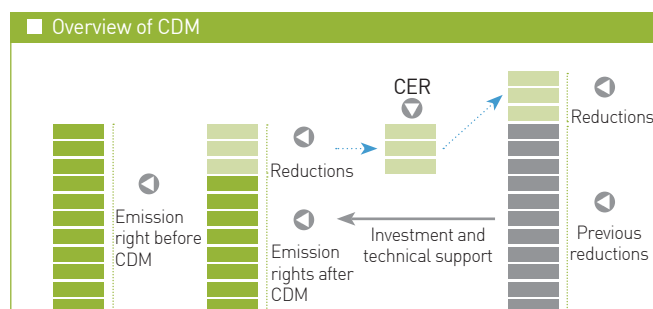
To be ready for inclusion in the Annex 1 countries and proactively respond to the GHG emission trading system, which will go into effect in 2015, KEPCO is planning to actively carry out CDM projects at home and abroad, and play a leading role in the carbon market that is emerging as a new green ocean in the age of climate change.

KEPCO has carried out wind power projects in the Gansu Province, China, etc. since 2006, and had 1.35 million tons of reductions recognized until 2011, securing emission rights worth about \$19.49 million. In Korea, we

secured 150,000 tons of emission rights per year through the CDM project for reducing insulation SF<sub>6</sub> gas emissions, the first such project registered with the UN in the distribution area, and we are planning to generate revenues from selling emission rights worth about KRW30 billion over the next 10 years. We will draw up the mid-to long-term CDM master plan, and implement the carbon asset management system (CAMS) for maximizing carbon reductions and systematically managing costs, and go about carrying out CDM projects systematically.

Results of CDM projects			
Results	2009	2010	2011
No of CDM projects	9	13	21
Secured emission rights (10,000 tons)	26	45	52
Sales revenues (\$10,000)	378	592	825

CDM strategy	
Strategy I	<ul style="list-style-type: none"> <li>Turn domestic and overseas business operations into CDM projects</li> <li>Accumulate project development experience and expand participation in projects</li> </ul>
Strategy II	<ul style="list-style-type: none"> <li>Implement the carbon asset management system (CAMS)</li> <li>Effectively secure emission rights and generate sales revenues</li> </ul>



Non-Annex 1 countries (developing countries)      Annex 1 countries (advanced countries)  
 \* CER: Certified Emission Reduction [1CER = 1tonCO<sub>2</sub>]  
 \* Annex 1 countries: Countries obligated to reduce emissions pursuant to the Kyoto Protocol like EU, Australia and Japan (38 countries)

Annex 1 countries (advanced countries)	Non-Annex 1 countries (developing countries)
Achieve reduction goals by reflecting emission reductions to their performance	Receive technical and economic assistance from advanced countries

# Efforts to reduce greenhouse gas emissions



## Efforts to reduce greenhouse gas emissions

GHG emitted by KEPCO and the six GENCOs can be mainly classified into two types: direct emissions, such as CO<sub>2</sub> from the use of fossil fuels during power generation and SF<sub>6</sub> emissions from the switches in the transmission process, and indirect emissions from use of electricity. In 2011, GHG emissions from the KEPCO group, which includes the six GENCOs, totaled 210 million tons, 1 million tons of which came from KEPCO. KEPCO's emissions are mainly direct SF<sub>6</sub> emissions and indirect emissions from the use of electricity in the office building.

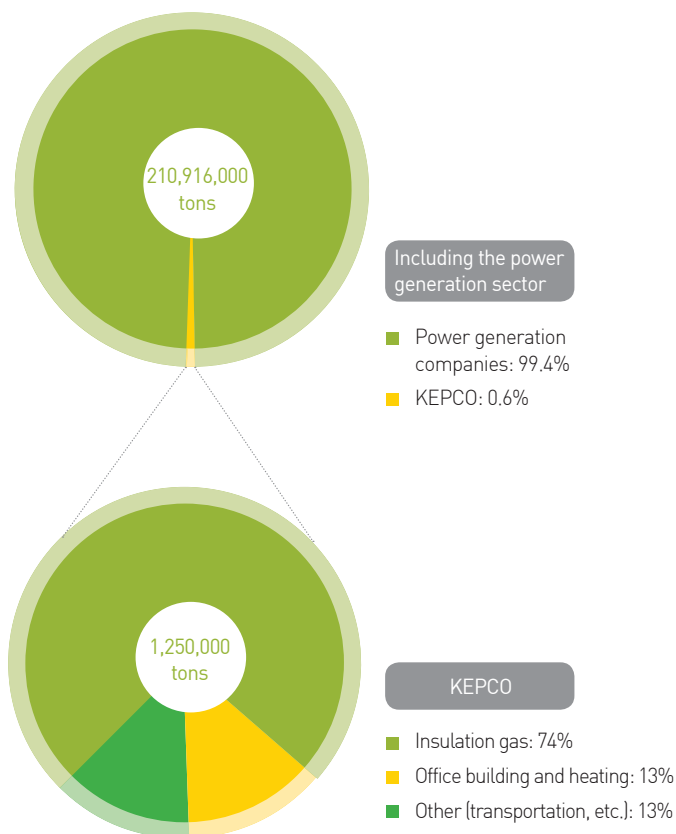
In 2007, we established a GHG Emission Data System in accordance with international standards in 2007, and in October 2008 data integrity was verified through the "GHG inventory" on GHG emission statistics control and emission volume (KEMCO GHG Certification Office). To improve the speed and accuracy of tallying GSH emissions, KEPCO implemented the online GHG control system at the group level in February 2010, and has been operating this system since then. In August 2009, KEPCO became the first public corporation to acquire the carbon footprint label from the Ministry of Environment, showing the CO<sub>2</sub> equivalent for GHG emissions from T&D lines.

KEPCO is also engaged in CDM projects at home and abroad to proactively respond to the United Nations Framework Convention on Climate Change. For example, KEPCO has conducted 21 wind power generation projects, including the Saehanpae Wind Power Generation Project, since 2006. Until the end of 2011, we secured and sold 1.35 million tons (cumulative) of carbon credit, making cumulative profits of \$19.49 million. In Korea, we are carrying out a CDM project through reduction of distribution SF<sub>6</sub> gas emissions.

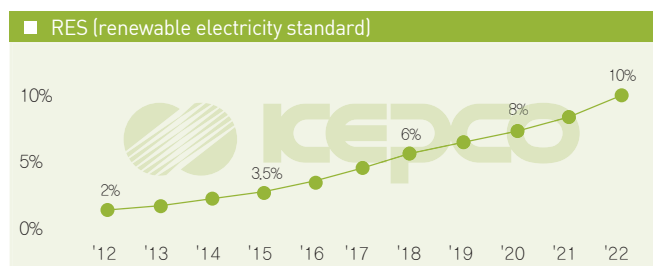
To accomplish the national GHG reduction goal, i.e. reducing 30% of BAU (Business As Usual) by 2020, the greenhouse gas and energy negotiated agreement system was enforced by the notification of the Ministry of Environment in March 2011, and KEPCO received a GHG reduction goal and energy reduction goal in October 2011, and is working to achieve the first-year goal in 2012.

Also, in May 2012 when the Act on the Allocation and Trading of Greenhouse Gas Emission Permits passed the National Assembly, and will be enforced in 2015. To prepare for this Act, KEPCO is taking part in the second pilot project regarding the industrial and power generation sector emission right trading system supervised by the Ministry of Knowledge Economy (2012), and is trying to have researches done for introduction of the Carbon Asset Management System (AAMS) to establish a strategy for systematic management of carbon credits.

## - GHG emissions by sector (2011)



Electric power generation GHG emissions statistic system	
<b>Targets</b>	• KEPCO and 6 GENCOs
<b>Results</b>	• Developed and validated the emissions statistics program: January - May 2007
	• Established the guideline for GHG emissions statistics: September 2007
<b>Results</b>	• Verified GHG inventory (Korea Energy Management Corporation) : October 2008
	• Implemented the Online Greenhouse Gas Management System for group companies: February 2010



# SOCIAL PERFORMANCE

Society

**KEPCO is a warm and honest leading company growing with everyone.**

KEPCO is making efforts to fulfill stakeholders' right to know and ensure the transparency of corporate management by disclosing management information through diverse channels. To fulfill the corporate social responsibility of a global enterprise, KEPCO is continuously conducting social contribution activities systematically, and creating a corporate ecosystem for shared growth with SMEs through win-win cooperation.

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# Strengthening the partnership with stakeholders

## Building up the communication with customers

(Integrated VOC system) KEPCO develops services to meet the needs of customers from interactive communication, and regularly analyzes and manages VOC through the integrated VOC system to fulfill the customer surprise management. KEPCO also opened up "Customer Suggestion" on its cyber branches; received 164 suggestions in 2011 and reflected them to improve our business system.

(Using SNS) KEPCO reinforces interactive communications through SNS such as "Facebook" and "Twitter" to effectively deliver Company information and electricity related news, meanwhile to listen and reflect the VOC on its service and system.

### Customer satisfaction survey scores

2009	2010	2011
95.7	98.1	98.8



▶ KEPCO Facebook

(AMI-based interactive electricity information) KEPCO distributed AMI as a part of the Smart Grid Project, and as of 2011, completed the installation of all the high-voltage and low-voltage customers, total 550,000 households. Customers with AMI are able to plan their electricity usage through Energy Portal (i-SMART) with checking their consumption and bills in real time. Also, KEPCO can lower the peak-time usage through the Regular Demand Control Program. KEPCO additionally distributes Smart Phone App which customers can check and pay their bills anytime for better service. KEPCO conducts Customer Satisfaction Survey twice a year, and uses the feedback for service improvement. As a result, KEPCO ranked No.1 in the Government directed Customer Satisfaction Survey for public corporations for thirteen years in a row in 2011.

## Fulfilling stakeholders' right to know

KEPCO discloses its management information through various channels like the business disclosure, integrated disclosure, corporate disclosure and information disclosure system, and tries to fulfill stakeholders' right to know and ensure the transparency of corporate management.

### - Disclosure

To protect investors and ensure the fair pricing of stocks, KEPCO actively responds to and implements the reinforcement of corporate disclosure, and to fulfill the right to know as minority shareholders' right to speak is reinforced, we are actively implementing corporate disclosure. KEPCO was selected and awarded as Excellent Enterprise in Corporate Governance by Korea Exchange and Korea Corporate Governance Service for 3 consecutive years from 2008 to 2010 by playing a leading role in contributing to creating an environment for faithful disclosure.

### - Information disclosure system

KEPCO will enhance customers' trust by guaranteeing the general public's right to know and ensuring transparency, and take the lead in promoting the general public's right to know by actively disclosing requested information. In addition, we will actively search for investment information as well as disclosure information to practice voluntary disclosure, and disclose information in a timely fashion so that key information about the company can be quickly provided to investors. In 2011, the information disclosure rate was 90.7%. A total of 236 information disclosure requests were received, and information was disclosed with regard to 214 out of 236 requests. The remaining 20 requests could not be met as they were third-party information or confidential information pursuant to the Personal Information Protection Act.

### Corporate disclosures

Classification	Regular disclosure	Fair disclosure	Voluntary disclosure	Conglomerate status	SEC disclosure
2009	4	20	56	2	62
2010	4	16	38	4	43
2011	4	15	47	4	65

### Status of information disclosure channels

Classification	Location of disclosure	Contents of disclosure
Business disclosure	KEPCO Website ( <a href="http://www.kepco.co.kr">http://www.kepco.co.kr</a> )	Management status, etc
Integrated disclosure	ALIO System ( <a href="http://www.alio.go.kr">http://www.alio.go.kr</a> )	Management Performance, etc
Corporate disclosure	DART System ( <a href="http://dart.fss.or.kr">http://dart.fss.or.kr</a> )	Business Report, etc.
Information disclosure	KEPCO Website ( <a href="http://www.kepco.co.kr">http://www.kepco.co.kr</a> )	Items individually requested

### - Shareholder-friendly management

KEPCO was in deficit for 4 years in a row from 2008 till 2011 due to rise of fuel costs, and as the financial structure worsened, even KEPCO could not pay dividends to shareholders and saw the value of the company declining. However, KEPCO made great efforts to meet shareholders' right to know and to obtain a high credit rating by conducting diverse IR activities regarding its management status, such as management IR, investment presentation, conference calls, interviews with investors and so forth. As a result, KEPCO is rated "A+," the same rating as the Korean government, by S&P as of now.

### | Shared growth with suppliers |

KEPCO is continuously reinforcing the competitiveness of suppliers, and supporting the diffusion of the sustainability management system. Meanwhile, also seeking shared growth by spreading the benefit sharing system and exploring overseas sales channels. Based on the three strategies for supporting SMEs, i.e. supporting SMEs' exports, building the infrastructure for shared growth, and reinforcement of technological competitiveness, KEPCO laid the foundation for reinforcement of the global competitiveness of SMEs and their overseas expansion by improving their technical know-how and quality.

### - Supporting SMEs' exports

KEPCO conducted export marketing with 120 SMEs in 16 countries including India and Brazil, and signed export contracts worth \$26.5 million, up 36% over last year, and conducted pilot export projects in 5 countries, including the US and Malaysia, to link the outstanding results of SMEs' collaborative R&D to export business. By conducting strategic overseas marketing for SMEs using the KEPCO brand, we have exported a cumulative sum of \$50 million since 2009, contributing to exploring overseas sales channels for SMEs.

### - Building the infrastructure for shared growth

Through 4 loan programs like the power energy loan, KEPCO supported SMEs with their operating funds worth KRW97.1 billion in 2011, and provided 16 SMEs with management consulting services like the management doctor program and the business mentoring program. Also, we developed the integrated SME support system, and systematically manage SME support projects.

■ E-procurement (Unit: %)			
Classification	2009	2010	2011
E-procurement	99.1	99.7	99.8

### ■ Financial support for SMEs (Unit: KRW100 million)

Classification	2009	2010	2011
Collaborative R&D	44	35	34
Reinforcement of Quality Competitiveness	15	1	4
Overseas Marketing Support	5	10	11
Management Support	-	14	8
Technology Development Support	105	64	65
Total	170	124	122

### - Reinforcing the technical competitiveness of SMEs

In 2011, KEPCO provided technology escrow service for 24 SMEs and spent KRW3.4 billion to support R&D in an effort to protect the core technologies of SMEs. Also, we contributed our short-circuit test system worth KRW20 billion to the Korea Electrotechnology Research Institute (KERI) to lessen the test fees for SMEs, and provided KRW400 million for 136 SMEs to help them acquire certification for their management innovation systems.

Vision: Global Top 5 Company growing with SMEs



Goal: Make 10 Global Small Giants by 2015



#### Action items

##### Lay the foundation for shared growth

- Build the support system
- Expand financial support
- Increase product purchasing
- Support management innovation

##### Reinforce the technical competitiveness of SMEs

- Invigorate collaborative R&D
- Expand technical support
- Reinforce protection of technologies

##### Help SMEs go abroad

- Promote exports
- Reinforce overseas business competency
- Develop small giants



▶ Conclusion of investment agreement for shared growth

## | Joint Growth of KEPCO Group Companies |

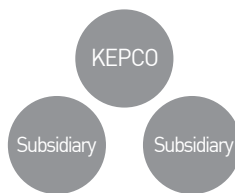
For the joint growth of group companies, win-win competition will be pursued on the basis of the autonomous and responsible management of each group company, but when it comes to overseas business and national projects requiring the synergies of the electric power industry, KEPCO and GENCOs form a cooperative system and pursue a comprehensive management of cooperation. Also, to stably supply electric power and enhance the competency of KEPCO Group, we are trying to procure fuel economically, reinforce cooperation in R&D, jointly expand overseas business, and jointly respond to climate change.

### Joint growth of KEPCO Group



#### Reinforce competitiveness and create synergies (Coopetition)

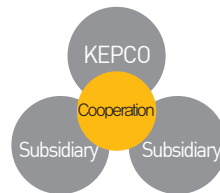
##### Win-win competition among group companies



##### Raise corporate value

- Cost Reduction and Higher Productivity
- Diversification of Revenue Sources
- Stable Supply of Electric Power and Higher Facility Efficiency

##### Cooperation for joint growth



##### Reinforce the cooperative system

- Joint Response to Fuel Supply and Demand
- Joint Participation in Overseas Projects
- Technical Cooperation and Joint R&D

### KEPCO Group's efforts to grow together

#### Improved management efficiency of GENCOs

- Strengthening of strategic cooperation to accomplish Management Innovation at GENCOs
  - Integrated purchasing of power generation fuel, integrated operation of maintenance materials, integrated management of IPRs, etc.
- Belt-tightening at group level: KRW 776.4 billion in savings

#### Stable Supply of Electricity

- Completion of power plants as scheduled: 1,800MW
- Maintaining Capacity Factor: 76.6% in 2011

#### Economic Purchasing of Power Generation Fuel

- Integrated purchasing of fuel: KRW 47.6 billion of savings

#### Group CEO Meeting

- Joint response to and coordination on management issues, and sharing of best practices
- Management performance analysis to reinforce feedback on management performance

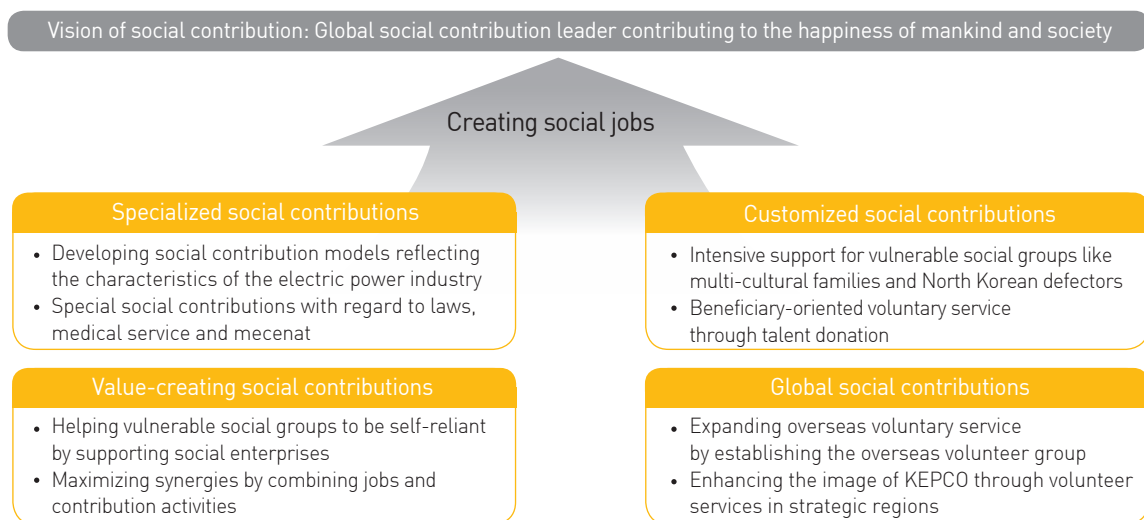




# Social contributions

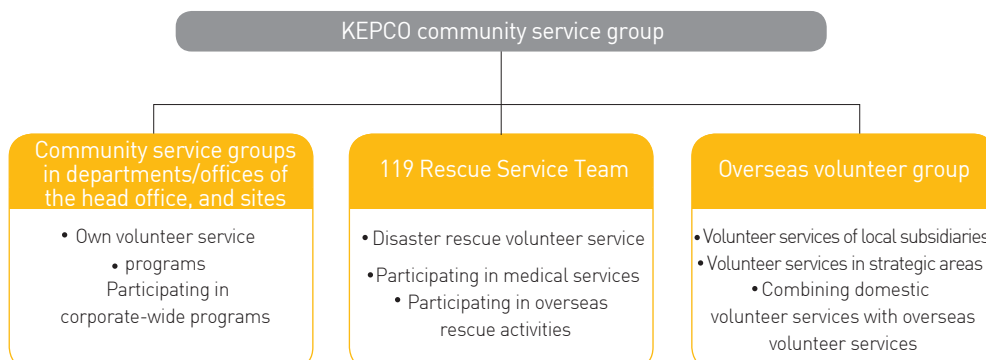
## | CSR management vision and system |

To fulfill our corporate social responsibilities as a global corporation, KEPCO re-established the CSR vision and system, and is trying to lay the strategic foundation for the contribution activities we have conducted temporarily or sporadically, and become loved by customers. KEPCO will build the virtuous CSR cycle for joint growth with vulnerable social groups and local communities by systematically and continuously engaging in social contribution activities, and present the role and model of corporate social responsibility.



## | KEPCO Community Service Group |

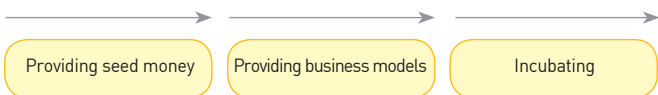
KEPCO has 272 community service groups in Korea. Each community service group is twinned with one local community. The KEPCO community service groups have been engaged in various voluntary services like sponsoring poor and needy children and repairing electric power facilities of vulnerable social groups. To enhance all employees' awareness of social contributions, environment protection, employees above the rank of general manager are obligated to do volunteer work at social welfare facilities, and the management and high-ranking officers of the labor union do voluntary service together on a quarterly basis. In 2011, KEPCO launched the 119 Rescue Service Team, and has conducted emergency rescue and relief activities in case of national disaster. Encouraged by these diverse volunteer services in Korea, KEPCO launched the overseas volunteer group, and has been conducting various contribution activities for vulnerable social groups.



# Social contributions

## Supporting the establishment and self-reliance of social enterprises

With the worsening of social polarization, creation of jobs for vulnerable social groups has emerged as an important social issue. KEPCO provides jobs for multi-cultural families, North Korean defectors by supporting the establishment of social enterprise, thereby taking the lead in laying the foundation for the self-reliance of vulnerable social groups. In addition to systematic support for promotion of social enterprises and improvement of systems, the employees of KEPCO donated the odd sums of their wages and started the microcredit program, and supported the startup and self-reliance of vulnerable social groups.



<b>Head office</b>	<ul style="list-style-type: none"> <li>Increased purchase of articles and services from social enterprises</li> <li>Micro loans for vulnerable social groups (cooperating with Social Solidarity Bank/about KRW170 million/year)</li> </ul>
<b>Sites</b>	<ul style="list-style-type: none"> <li>Support based on 1 Regional HQ-1 social enterprise MOU</li> </ul>
<b>Employees</b>	<ul style="list-style-type: none"> <li>Direct purchase through online marketplaces</li> </ul>

## Diversification of social contribution programs

KEPCO is contributing to the spread of the culture of sharing by engaging in diverse social contribution activities. The "Eye Love Hope Project," supporting eyesight recovery operations for low-income groups at home and abroad, gave the 'Light of Hope' to 40 people at home and 10 people abroad in 2010, and KEPCO set up a sisterhood relationship with 270 or so local children's centers, and supports them with learning, cultural experience and mentoring. In addition, KEPCO Art Center, the 'Hope & Love Sharing Concert' and the KBS & KEPCO Music Contest are contributing to the diffusion of culture and art. Starting this year, we are planning to put together a manpower pool for talent donation consisting of 1,000 people in areas like language, education and IT. While reinforcing volunteer services in special areas like medical service and laws, we will expand the sharing of culture to the socially disadvantaged through various mecenat activities like supporting the performance of the arts organization of North Korean defectors and unpopular winter sports.

### Spreading the culture of sharing through vulnerable social groups

- Supporting local children's centers
- Supporting expenses of eyesight recovery operation for the low-income people in both domestic and overseas

### Special volunteer services related to the electric power industry

- Volunteer service in the vicinities of electric power facilities
- Repairing electric facilities of vulnerable social groups

### Expanding the support of culture and art and the sharing of culture

- Hope & Love Sharing Concerts
- Art Center

## Diversification of social contribution programs

Classification	2009	2010	2011
Number of activities	5,795	5,726	10,204
Number of participants	33,188	32,179	62,568
Activity hours	6.5	5.6	11.3

## Guaranteeing basic energy right

KEPCO is trying to protect people's basic energy right by subsidizing electricity charges for the socially disadvantaged. For residential customers, we lifted power restrictions during the hottest (July-September) and coldest (December-February) months. In 2011, we supported 1.5 million households with supply of electricity. If they are facing service suspension because of unpaid electricity bills, we install a current limiter to guarantee a minimum power supply. Discounted rates are offered to customers with disabilities, low-income families, and social welfare facilities. Meanwhile, we maintain the large-family discount rates, which were introduced in 2007, to alleviate the progressive rates for residential use, and the discount rates for households with more than three children to support the government's policy to raise the birth rate.

## Social welfare discounts

Classification	Target	Discount rate (%)	Discount amount (KRW100 million)		
			2009	2010	2011
Customers with disabilities	Grades 1-3	20	564	633	620
Low-income groups	Social assistance	21.6	274	330	419
Social welfare facilities	recipients, etc.	20	200	256	308

## Major social contribution activities

### 1. 'Eye Love 1004 project' for eyesight recovery operations for low-income groups at home and abroad

- Paying the costs of eyesight recovery operations for 100 persons a year until 2021 (60 at home, and 40 abroad), totaling 1,004 persons
- 50 persons underwent the operation in 2011 (40 at home, and 10 abroad)



▶ Workshop for the KEPCO Community Service Group (CSG)

### 2. Support for the socially vulnerable children and youths

- Sisterhood relationships with 287 regional children's centers around the country (the largest number for a public corporation)  
Learning guidance, cultural experience and school lunch assistance (2,261 times/KRW370 million funded)
- Mentoring through sisterhood with children and youths in the low-income group (721 persons)  
Career counseling, OA training, and personality education (1,409 times/4,458 participants)

### 3. 'Energy of Love Project' for low-income households with limited supply of electricity

- Targets: Low-income households with limited supply of electricity among social assistance recipients and near-poverty groups
- Details: Using the voluntary donations of employees to pay for the unpaid electric charges of low-income families  
※ Results (2003-): 12,780 households, KRW1.64 billion

### 4. Volunteer activities to help repair electric facilities for the socially-vulnerable and the elderly living alone

- Results (2011): Checked the safety of the electric facilities of 8,411 households and repaired them, and replaced lamps



▶ Briquette delivery with love

### 5. KEPCO 119 Rescue Service Team provided rescue and relief services

- Founded KEPCO 119 Rescue Service Team (October 2010)
- Provided rescue services in case of snow and flood (7 times)
- Provided volunteer services at large events like the World Championship in Athletics (3 times)



▶ Disaster recovery support on heavy snow

### 6. Campaign to find and prevent missing children

Classification	Description	Remarks
Posting photos of missing children	Post photos of missing children (electricity bill, company magazine and newsletters)	Reunion of the separated family members (106 persons)
Using name tags	Use name tags to prevent missing children	150,000 name tags
Videos about prevention of missing	Production and distribution of videos (elementary schools across the country) Employees performed	6,000 videos
Puppet shows to prevent missing children	puppet shows to prevent missing children by employees	60 times

# Ethical management

## | Ethical management |

To realize sustainability management based on transparent management, and to become trusted by people, KEPCO established the company-wide anti-corruption and integrity plans in March 2011, and reinforced the foundation for ethical management, e.g. diagnosis of the level of corruption and feedback by conducting its own integrity surveys in May and December 2011. KEPCO has enhanced our ethical standards in step with changes in internal and external environment since we became the first public corporation to establish the Code of Ethics by establishing the code of conduct for employees in 2003, the code of ethics for high-level accounting officers in 2004, the action guide for persons involved, and the action guide regarding international transactions. We are also publishing guidebooks on the code of conduct to internalize the code of ethics and enhance effectiveness. Particularly, in 2011, we introduced the 'ABC program' to provide executives, employees and stakeholders with customized education on integrity and opportunities for self-inspection, and enhanced the effectiveness of anti-corruption and integrity measures. Meanwhile, KEPCO entered into an integrity pact with suppliers in 2007,

and held the 'ethical management meeting' periodically with related organizations like the Korea Electrical Contractors Association in a bid to continuously induce stakeholders to take part in ethical management. In July 2011, we set up the mobile inspection team in charge of continuous inspection. We recruited an ex-prosecutor as an inspector to ensure the independence and professionalism of inspection activities, and 30 inspectors in 6 zones around the country are visiting local sites and inspect the sites to eradicate corruption. As a result of these ethical management activities, KEPCO was selected as the No. 1 company among 21 public corporations in the 2010 public corporations integrity survey conducted by the Anti-Corruption & Civil Rights Commission, and exempted from the integrity survey in 2011 as an incentive. KEPCO received the highest grade in the evaluation of anti-corruption policies for 6 years in a row. In 2012, based on the CEO's strong will to do ethical management, KEPCO is continuously working hard to establish a world-class culture of ethics and integrity, improve areas vulnerable to corruption, and reinforce anti-corruption activities.

## - Stakeholder model



### High-ranking executives

#### **A**ction first by leaders: Executives' leadership of integrity

- The executives' leading by example is the shortcut to the efficient diffusion of ethical management.
- Responsibilities and ethics proportional to authorities are required.

### Employees

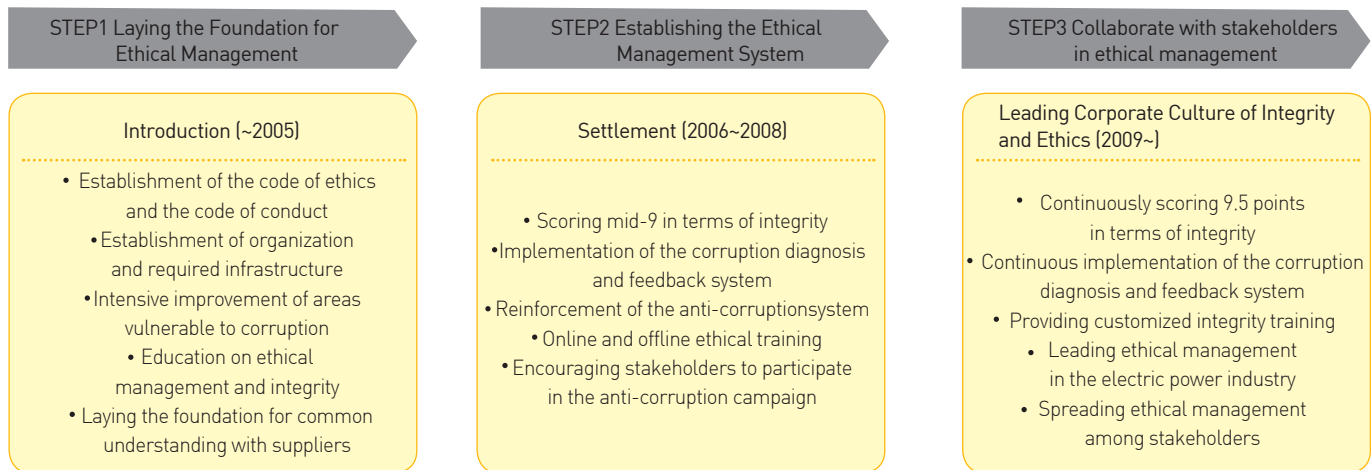
#### **B**ottom-up Approach: Bottom-up ethical management based on voluntary participation

- Bottom-up participation in ethical management is the foundation of continuous ethical management.
- World-class ethics

### External stakeholders

#### **C**ollaboration: Collaborate with stakeholders in ethical management

- Cooperation of stakeholders in the electric power industry is key to successful ethical management
- Diffusion of best practices, cooperation and support



### | Proactive control of corruption risks |

Any job or position, which involved corruption or is prone to corruption after long service will be subjected to job rotation in an effort to proactively control risks of corruption. Jobs to be rotated at the head office and sites are specified by task and rank, particularly in the sectors of finance, procurement, transmission & transformation, distribution, construction and quality inspection, and detailed functions are classified. Employees, who were submitted to disciplinary actions for job-related corruptions like taking bribes and embezzlement, are strictly prohibited to be assigned to those jobs to be rotated. No one is allowed to serve in the position subject to job rotation for more than two years starting in 2011 (it used to be three years). ] The IT-based intelligent monitoring system, introduced in 2009, is operated to monitor 30 indexes in various areas like cases repeatedly detected by audit, sales, financial accounting, purchased materials and so on. Also, the "corruption reporting center," which allows you to report corruptions anonymously, further reinforces control of new types of corruptions. KEPCO had a paradigm shift from control focused on detection to prevention.

### | Integrity & ethics training |

KEPCO employees continue to receive training on integrity & ethics to internalize the corporate culture of integrity. In 2011, the standing auditors visited 28 sites, and gave a special presentation on integrity to deliver top management's commitment to integrity. The Audit Office conducted the "Visiting Integrity Training" in 240 sites across the country. In addition, the KEPCO Academy offered on/offline lectures. Each executive received 9.21 hours of integrity training a year. KEPCO is planning to introduce the "mandatory integrity training by lifecycle," and reinforce integrity training for newly appointed employees, employees scheduled to be promoted and high-ranking public officials

### | Actions taken against corruptions |

KEPCO has four levels of disciplinary actions for employees involved in corruption: (1) reprimand, (2) salary reduction, (3) suspension from duty and (4) dismissal. We introduced the "Three Strike Out" rule which allows the company to dismiss employees who have been disciplined three times for the same corruptions like receiving bribes, gifts and embezzlement no matter how trivial they are. In November 2011, we distinguished between active and passive receipt of monies and entertainment. If it was active, i.e. employees asked for it, additional punishment was possible, and we reinforced punishment for anti-social behavior by including drunken driving in the "Three Strike Out" rule.

# Code of ethics

Enacted in Feb. 1996  
1st Revision in Dec. 2003  
2nd Revision in Jan. 2005  
3rd Revision in Dec. 2009  
4th Revision in Dec. 2010

We are truly proud that KEPCO has contributed to the development of the national economy and society by providing the best quality service and electric power to all customers. That pride and self-confidence is now being leveraged to make KEPCO a global power company that continues to grow and develop together with all stakeholders. To this end we are pursuing core values, which are "Global Excellence," "Customer Respect," "Performance Drive," "Challenge & Innovation" and "Social Responsibility." We understand that fair and transparent operation, firmly grounded in corporate ethics, is essential for us to achieve that end. Therefore this Code of Ethics has been adopted and all employees are required to follow it as the standard for correct behavior and proper decision making.

First, we share the company's core values and vision, carry out our duties with the spirit of challenge and entrepreneurship, comply with all laws, and perform tasks in a fair and faithful manner.

Second, we provide customers with the best quality service and electricity and respect all customers so as to pursue co-prosperity with customers.

Third, we make a healthy profit through business innovations and take the lead in enhancing corporate values and achieving sustainable growth.

Fourth, we respect each and every employee, give them equal opportunities, create a pleasant and comfortable working environment and make them proud of our company.

Fifth, we adhere to Korean and overseas regulations and laws, abide by international agreements, protect the environment, and actively participate in public interest activities as a member of society so as to contribute to the development of the nation and society.

## Chapter 1 General Provisions

This Code of Ethics is the standard for correct behavior and proper decision making. It must be complied with by all KEPCO employees in order to create a corporate culture based on fairness, transparency and business ethics.

## Chapter 2 Basic Ethics for KEPCO Employees

1. We share company's core values and vision, fulfill our duties and pursue personal and company growth through continuous self-development.
2. We abide by all laws, perform tasks in a fair and faithful manner, make no unfair profit and strive to maintain personal dignity and the company reputation.
3. We recognize that both labor and management are owners of our company and take the lead in pursuing joint growth and co-prosperity built on trust and understanding.

## Chapter 3 Ethical Treatment of Customers and Suppliers

1. In the spirit of respecting customers, we always put customer value first and earn customers' trust by providing them with the best quality electricity and services.
2. We respect the order of the market economy based on the principle of free competition and compete with others in good faith on the basis of mutual respect.
3. We provide a fair chance to suppliers, perform tasks in a mutually equal position and seek win-win growth with suppliers by providing them with diverse kinds of support.

## Chapter 4 Ethical Treatment of Shareholders and Investors

1. We make sound profits through efficient management and transparent performance so as to protect the returns of shareholders and investors.
2. We pursue the sound growth and development of our company over the long term by enhancing corporate values through continuous changes and innovations.
3. We disclose corporate information in a transparent manner, provide more opportunities to participate in the company decision-making process and help shareholders and investors exercise their rights.

## Chapter 5 Ethical Treatment of Employees

1. We respect each and every employee, give equal opportunities to them according to their competence, and neither discriminate nor provide special treatment on the basis of gender, educational background, religion, age, or disabilities.
2. We fully support employees' efforts to develop themselves and grow into the professionals necessary for our company to succeed. We also create a work environment that encourages creative and empowered thinking and behavior.
3. We establish a pleasant and safe work environment and strive to make employees proud of the company based on mutual trust and understanding.

## Article 6 Ethical Treatment of the Nation and Society

1. We continuously grow and develop through reasonable and responsible management so as to contribute to the development of a nation and society and fulfill social responsibilities as a corporate citizen.
2. We promote safety awareness to protect employees and customers in the spirit of respect for all people. Understanding the importance of protecting the environment, we comply with Korean and foreign environmental laws and regulations and endeavor to protect the environment and prevent pollution.
3. We abide by Korean and foreign laws and regulations and international agreements, and we respect the culture of host countries and contribute to their economic development.

# Code of Conduct for Suppliers

## - Preamble

KEPCO will lead the standards in the global energy market based on green energy and smart technology, and accomplish the vision of GLOBAL TOP GREEN & SMART ENERGY PIONEER. We will create a happy future in which all mankind can enjoy clean and convenient energy. To this end, the code of conduct for suppliers proposed by KEPCO is the basic ethical, social and environmental standard that all suppliers of KEPCO must comply with, and we firmly believe that compliance with these standards will bring profits as well as global competitiveness to both KEPCO and its suppliers. This code of conduct for suppliers of KEPCO is the standards that KEPCO's suppliers, their employees, representatives and subcontractors (hereinafter referred to as 'suppliers') must comply with, and KEPCO will recommend that suppliers should comply with the code of conduct by continuously communicating and conversing with them. To establish a clean and transparent corporate culture, and lay the foundation for creating a happy energy culture for mankind, KEPCO establishes the code of conduct for suppliers and recommend it.

## - General Conditions

All KEPCO's suppliers at home and abroad must comply with domestic and international laws, and the ten principles of the UN Global Compact, which was enacted in relation to human rights, labor, environment and anti-corruption, and with the guideline of the code of conduct for suppliers. Also, they must comply with the detailed conditions regarding ethical, social and environmental standards that KEPCO presents additionally when they fulfill contracts, and the suppliers must recommend that the subcontractors of suppliers should be aware of and comply with this code of conduct.

Code of Conduct for Suppliers	
Classification	Description
Ethical Standards	Clean and transparent management and prohibition of bribery Fair trade & prohibition of concerted act, illegal subcontracting and wrongful requests
	Education for a clean corporate culture and reporting of irregularities and corruptions
	Compliance with related tax and labor laws
Social Standards	Prohibition of child labor and profits from child labor
	Prohibition of discrimination and guarantee of the freedom of assembly and association
Environmental Standards	Compliance with environmental and safety laws
	Participation in the diffusion of eco-friendly technology
	Pursuing environmental management placing emphasis on the environment

### Detailed Conditions

To ensure the effectiveness of its anti-corruption policies by pursuing ethical management with its suppliers, and contribute to the diffusion of a clean culture, KEPCO became the first domestic corporation to establish and enforce the 'Code of Conduct for Suppliers' in July 2012. The Code of Conduct for Suppliers presents guidelines in ethics, society and environment, covering bribery, prohibition of discrimination and environmental management, and it is provided to all suppliers through the suppliers' portal SRM when they participate in a tender.

#### I. Ethical Standards

- 1.1 Suppliers must do their best for transparent and clean management, and should not conduct any immoral act like unjust enrichment and bribe giving and taking. In particular, they should not provide KEPCO's employees with any bribery like money and entertainment.
- 1.2 Suppliers should not engage in any concerted action that harms fair trade, or conduct any illegal subcontract transaction with a third party.
- 1.3 Suppliers should not make any wrongful request, likely to affect fair conduct of duty or decision-making, to KEPCO's employees for their own or others' interests.
- 1.4 Suppliers must educate their employees to create a clean corporate culture in which everyone turns down bribes and requests, and if they discover corruptions when they carry out contracts, they must report them to KEPCO ([www.kepcoco.kr](http://www.kepcoco.kr)).

#### II. Social Standards

- 2.1 Suppliers must comply with the tax and labor laws of the regions where they conduct business, and try their best to act according to the provisions and spirit of such laws.
- 2.2 Suppliers should not receive service in violation of domestic and international laws.
- 2.3 Suppliers should not utilize child labor or make profits from it in any case.
- 2.4 Suppliers should not discriminate in employing or hiring workers on the basis of race, religion, sex and physical abilities, and unless prohibited by laws, they must give workers the freedom of assembly and association and the right to bargain collectively.

#### III. Environmental Standards

- 3.1 Suppliers must comply with the environmental and safety laws of the regions where they conduct business, and try their best to act according to the provisions and spirit of such laws.
- 3.2 Suppliers must comply with environment-related procedures to continuously improve the outcomes of environmental protection, and make efforts to spread eco-friendly technology.
- 3.3 Suppliers must provide workers with healthy working and service conditions, e.g. giving them essential safety devices.
- 3.4 Suppliers must engage in management activities placing emphasis on the environment, e.g. trying to minimize damages to the environment of the countries and regions where they conduct business.

# Protection of human rights

## | Eradication of discrimination |

We have pledged not to discriminate against our employees on the basis of gender, educational background, religion, age, and disabilities in Chapter 5 (Employee Ethics) of the Code of Ethics. We also faithfully abide by ILO Convention No. 111 Concerning Discrimination In Respect of Employment and Occupation. None of our operations inside or outside Korea have a record of human rights violations or discrimination on grounds of gender or disabilities.

## | Gender equality |

KEPCO is working towards gender equality in various ways such as eliminating discriminatory factors when hiring and promoting female workers, and launched the Counseling Center for women employees. We began to enforce a quota for women employment in 1998, and 25.4% of all persons hired in 2011 were woman, gradually raising the ratio of women in the workforce (14.6% in 2010 14.7% in 2011). Moreover, the number of female managers rose from only 7 in 2000 to 82 in 2011. We strictly comply with ILO Convention No. 100 Concerning Equal Remuneration for Men and Women Workers for Work of Equal Value, and remunerate men and women fairly.

## | Privacy protection |

We have implemented technical security measures such as web firewalls and system access control to protect the privacy of customers and prevent illegal data leaks. We also provide education on the importance of privacy protection on a regular basis.

## | Human rights education |

KEPCO provides education on human rights issues to part-time and new employees on a regular basis to raise their awareness of human rights and promote an organizational culture without discrimination. In 2011, we provided all employees with education on prevention of sexual harassment. In addition, human rights education was given to all 486 counselors through professional outside training or itinerant education. We will continue to provide training and education to ensure gender equality and protect human rights.

## | Prevention of forced labor and child labor |

KEPCO complies with the Labor Standards Act and ILO Convention No. 105 Concerning Abolition of Forced Labor, and the principle in Labor Standards, one of the UN Global Compact's top 10 Principles, and there was no record of child labor or forced labor.

## | Hiring vulnerable social groups |

KEPCO hired 588 workers with disabilities in 2011. Workers with disabilities receive 10% additional points in the employment process. We will continue to increase the number, for example, by enhancing the working conditions for the disabled. Meanwhile, we hired 42 high school graduates, 55 local job seekers and 57 science and engineering majors. We are continuously supporting their financial independence and job-seeking.

## | Handling employee grievances |

To improve the quality of life by resolving grievances at work, KEPCO established diverse communication channels including the On-line HR Grievance Handling System, CEO Hotline, the Labor-Management Grievance Handler System and the Women Workforce Support Portal. In 2010, a total of 103 cases were reported through the HR Grievance Handling System, and 97 of them were resolved.



▶ Korea National Electrical Workers Union

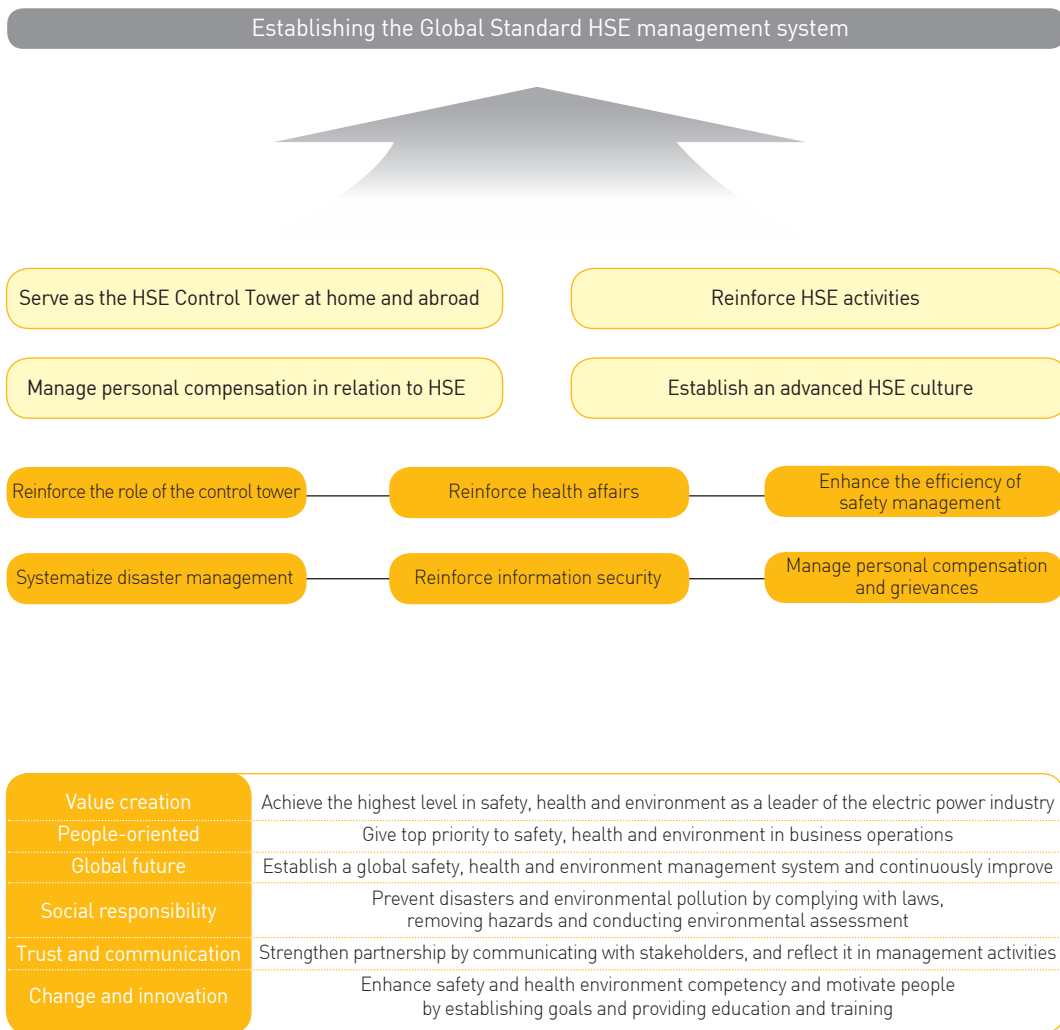


# Safety and health management (HSE)

## | HSE Office and Safety and Health Management System |

To achieve the global level of safety and health management, KEPCO established policies based on domestic and overseas standards like the safety and health management system (K-OHSMS 18001) and the environmental management system (ISO 14001).

In 2012, we established the HSSE Office as a control tower that oversees the HSSE (Health, Safety, Security and Environment) operations at domestic and overseas sites, laying down the infrastructure for systematic implementation of health and environment policies. Also, we integrated the existing safety and health policy and the existing environmental policy, and established the HSE (health safety environment) policy, and reflected them to internal standards and shared them across the organization in an effort to raise employees' awareness of safety, health and environment, and lay down the foundation for spreading the mind-set.



## Establishing the safety and health control system for overseas operations

KEPCO is making diverse efforts to establish the safety and health system in our domestic and overseas sites. To reinforce the HSE management at overseas construction sites like UAE and revamp our role as a control tower in HSE, we reinforced our HSE organization and the safety, health and environmental incident reporting system, and established audit standards. To respond to the increasing interest of the international society in HSE and the rising importance of HSE, and foster Global HSE experts, we trained 60 HSE experts who obtained IOSH and NEBOSH licenses. We are reinforcing our safety and health management activities at our overseas sites.

### Accident-free overseas sites

- UAE BNPP nuclear power plant (5,600MW) construction site: 10 million accident-free hours (April 2012)
- UAE Shuweihat S3 gas combined cycle power plant construction site (1,600MW): 4 million accident-free hours (June 2012)

### Global Standard HSE System for the UAE BNPP nuclear power plant construction site

- Safety and health management system: acquired K-OHSMS 18001 / OHSAS 18001 certification (August 2012)
- Environmental management system: acquired ISO 14001 certification (November 2011)

### HSE audits at overseas sites

- HSE audit results in 2012: Mexico Nortell gas combined cycle power plant construction site, UAE BNPP nuclear power plant construction site, and Ilijan and Cebu power plants in the Philippines

## Customer health and safety

In an effort to promote safe use of electricity, KEPCO is reinforcing electric safety promotions by using various media such as newspapers, CATV or outdoor advertising with focus on cases by time and type. We also developed the dangerous place management system and linked it to the construction information of related agencies, and systematized safety accident prevention activities for the general public in vulnerable areas by registering construction sites and managing the history of inspections.

## Safety and health management performance

To create a safe and energetic workplace, KEPCO formed the Occupational Safety and Health Committee, which is composed of 10 labor and management representatives respectively. They visit sites for safety diagnostics. To raise employees' awareness of safety, we make the "Electric Safety Calendar" and post it in our safety portal each month, and published "Safety-Zine" and hosted the "safety contents competition" (July ~ September 2011) in a bid to establish the safety culture. We also extended the health management program to the family members of employees to improve the health of employees. In 2011, 9,293 employees and 918 spouses of employees had blood tests, and 7,088 employees had the flu shot. In addition, we are increasing employee satisfaction by providing counseling service after health checkup and holding anti-smoking clinics. In 2011, three employees were involved in an industrial accident (a 0.016% accident rate) and no case of occupational illness was reported.



On-site safety inspection

# Human resource development

## Who do we want?

KEPCO identified required competencies by analyzing our business environment and shared values, and defined the ideal employee by surveying our employees and interviewing the CEO and management. This definition consists of the slogan, a statement describing the slogan in detail, and enablers, i.e. elements required to become the ideal employee. The slogan is "Global Top Energy Pioneer" to clarify the vision of KEPCO and enhance the execution power. It represents the ideal employee of Global KEPCO with the global No. 1 mentality and the pioneer spirit necessary for becoming the world-best comprehensive energy group in the global market in the age of limitless competition. The four enablers for materializing the ideal employee of KEPCO are "Generalist," "Entrepreneur," "Value Creator" and "Passionate Challenger." Based on this definition of the ideal employee, we hire and secure human resources, develop human resources, and manage overall human resources through evaluation and remuneration.



## - Recruiting

KEPCO is actively responding to national policies by continuously hiring new employees to reduce youth unemployment, and hiring more female workers and people with disabilities. In 2011 we hired 155 new employees, and 971 youth interns and the numbers of displaced workers was 506. In 2011, the wage of newly hired college graduates was 256% of the statutory minimum wage. (excluding the stipend for unused annual leave and the portion of annual salary based on performance)

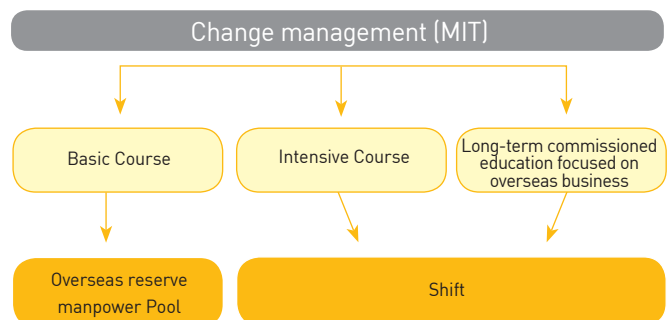
## ■ New employees (Unit: person)

Classification	2009	2010	2011
New employees	92	132	155

## Overseas business specialists

To shift our focus from domestic business to new areas and new contents, KEPCO is conducting "Overseas Business Shift Education" for 5,051 additional workers required for overseas business until 2020. As there will be reserve workforce due to the increased efficiency and smartness of domestic business, KEPCO will strategically redeploy them to growth areas (300 persons), and increase the scope of redeployment with time to increase revenues and create more jobs. To this end, we began to provide intensive job training and language and mind training for workers in domestic business in 2011, and thus enhance their global competencies. To foster professional workforce for expansion into the global market, we implemented the overseas business professional workforce education system and Course Tracks, and provided long-term commissioned education for fostering professional workforce specializing in overseas business like the strategic region localization courses, resource trading, and IB-MBA, and concentrates on expanding the overseas business manpower pool.

## - Overseas business shift education system



## ■ Overseas business shift education system

Classification	Internal education		Commissioned education	Total
	Instructor-led	Cyber		
Number of courses	194	83	241	518
Number of persons	8,955	184,090	8,679	201,724



▶ Mind Innovation Training education

### | Educational programs for spreading the innovative culture |

KEPCO is trying to enhance the ability to adapt to frontline operations by operating the Mind Innovation Training for reinforcing the competency of employees and the orientation program for new managers, and reinforcing the mentoring system like the professional competency reinforcement courses. In addition, we are expanding the Blended-Learning program that combines e-Learning and On-offline courses with emphasis on links to frontline operations. We are using the education portal system to provide information on major education courses and feedback on performance.

We are supporting the lifetime learning of employees by implementing an educational system customized to lifecycle including outplacement education and operating lifetime learning programs.

### | Performance evaluation |

KEPCO has evaluated the performance of all employees once a year and paid a performance bonus based on the outcome of the evaluation. We also have a flexible evaluation system to respond to changes in the business environment. We also adopted an open competition-based placement system that fills available positions with successful applicants. In particular, we are increasing opportunities for employees to give their abilities a full play by deploying talented people with specialty in areas that are future growth engines in overseas business.

KEPCO will reinforce employees' competencies through a fair performance assessment and competency development and make continued efforts to create a performance-based organizational culture.

# Employee welfare

## Win-win cooperative relationship between labor and management

To firmly establish the win-win labor-management relationship, KEPCO is making joint efforts with the labor union. KEPCO operates the joint industrial safety program involving both labor and management, e.g. labor-management industrial safety health activities and joint inspections. We are reinforcing mutual communication and cooperation for sustainable growth and creation of shared values by proclaiming the social responsibility charter of the labor union and engaging in social contribution activities together with the labor union. KEPCO faithfully complies with ILO Convention. In 2011, 14,608(76.7%) employees out of 19,303 belong to the union. The collective agreement is renewed every two years and applied to all employees.



Harmony between labor and management

## Supporting the harmony between work and life

KEPCO is supporting the harmony between life and work for female workers by operating diverse childbirth and child-rearing programs. To identify consumer-oriented practical programs, we introduced various programs, such as supporting the use of replacements for people on maternity leave and parental leave, reducing working hours during the child care period, the flex-time program to guarantee the time for child care, (paid) leave for medical examination of infants, infertility leave, and using the annual paid holidays by half days. By operating the Pool System for substitute personnel against those who apply for maternity leave for child birth and child rising (494 retirees and 1,233 ordinary persons/as of July 2012), we are reducing the load of those who give birth to children and who are on maternity leave, and ensuring the harmony between work and life. Starting in September 2012, we completed a system for people on parental leave to alleviate the vacuum left behind by people on maternity leave and parental leave, thereby contributing to efficiently securing substitute workforce and reducing the load of people on maternity leave and parental leave. Also, KEPCO operates the daycare center and the maternity and health management office at the head office, and provides systematic support for the harmony between work and life.

### Supporting the harmony between work and life

Classification	2007	2008	2009	2010	2011
Maternity leave	179	200	212	196	180
Parental leave	64	82	99	142	206
Infertility leave	-	-	-	5	5

## Diverse welfare programs

To meet the diverse welfare needs of employees and create a great workplace, KEPCO is trying to develop a welfare program covering the entire life cycle including health and leisure. For a healthy and happy working life, we operate the health management office, and provide PET-CT health checkup service for prospective retirees, and offers various affiliated welfare services like a discount shopping mall exclusively for employees, and accommodations and travel discounts. In August 2012, we opened the cyber welfare center called 'Happy Charging Station,' a comprehensive online welfare portal system, and provide services like the lowest-price shopping mall exclusively for employees, an online flea market, and a welfare community. To guarantee income for the elderly in the aging society, KEPCO is considering introducing the retirement pension program in the second half of 2013. To form a consensus among employees and help the financial burden before the introduction of the retirement pension program, we introduced the retirement insurance system in 2005. As a result of these welfare programs, the employees' satisfaction with welfare went up 0.3 points over last year.



KEPCO a nursery

## | Spreading the culture of trust and communication |

KEPCO holds a breakfast meeting with the CEO every week, and employees in various areas are invited, and their voices are heard. As they can frankly talk about business issues, opportunities for the diffusion of the horizontal culture in the organization and the reinforcement of communication are created. Also, on the Day of Business Reporting held every month, the business issues and CEO's message are shared with all employees. The publication of the newspaper-type weekly newsletter KEPCO Today enables KEPCO to share the current status and issues of KEPCO with employees, their families and customers, and SNS like Facebook and Twitter is helping create a friendlier and closer image of KEPCO. As a result of these efforts, in August 2012, KEPCO received the 'Korea SNS Award' in the public sector.



▶ Workshop for sites representatives around the country

## | Junior Board |

To use the ideas of young employees to invigorate the organization and energize our innovation activities, KEPCO organized and operates the Junior Board. The Junior Board, consisting of 6 groups and 200 members, proposes business improvement ideas from various points of view, and develops global leadership competencies through exchange with mentors in various areas and global benchmarking.

### - A postscript: Junior Board

Myeong-Gyu Song, Transmission Operation Dept

What I felt through Junior Board activities can be summarized as follows:  
 First, I could feel the sense of the crisis in my bones with regard to the future of the company. Now that the future of the company is uncertain, I could realize what all employees of KEPCO must do right now.  
 Second, I could commune with the group members of the Junior Board. Through repeated meetings with them and in the process of making reports, I realized " I am not alone. If I can work with such forward-looking and passionate colleagues, I can do anything." I hope that the Junior Board will be further invigorated, and make KEPCO the best company with their passion and ideas.



▶ Junior Board camp

# APPENDIX



70P 3rd party assurance statement

73P GRI Index

76P ISO26000 Index

77P Financial information

78P KEPCO Group Companies

80P Power Grid Map

81P Awards Received &  
Initiatives Joined

81P National &  
International Memberships  
in Associations

82P Glossary

84P Additional information



**Il-Chong Nam**

Prof. of KDI School of Public Policy and Management

### Prior suggestions

- Continuous development of green technology and implementation of an eco-friendly management system
- It is necessary to implement a reasonable tariff structure to bear the burden of low-carbon green growth.

### Follow-up suggestions

- KEPCO's strenuous efforts to respond to climate change and prevent global warming stand out.

Responding to the increasing energy demands due to the acceleration of global warming, and reduction of carbon emissions and pollutants became important tasks across the globe, and they are emerging as important policy issues in Korea as well.

KEPCO, the largest power company and a public corporation in Korea, must take part in the global efforts to prevent global warming, and proactively contribute to the Korean Government's pursuit of low-carbon green growth, and KEPCO's active sustainability management drive will be very desirable.

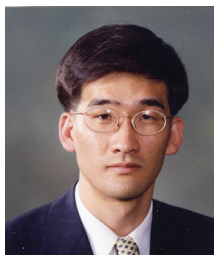
- Low-carbon green growth policies compliant with economic principles are necessary for sustainable growth.

Low-carbon green growth means that higher costs will be paid in the production, transmission, supply and post-management of energy to improve the environment. Accordingly, the size of costs and financial sources needs to be determined within the framework of market economy. Expenditure of high costs without the support of financial sources is not sustainable, and eventually destroys the market and brings a greater harm to the environment.

- The tariff system must be improved reasonably to shoulder the burden of green growth.

KEPCO must concentrate its efforts on assessment of appropriate costs in each area pursuing low-carbon green growth and methods of recovering costs to minimize social costs. To this end, an appropriate level of carbon tax and CER (Certified Emission Reduction) prices must be determined. The current electricity tariff regulation fails to reflect or consider the increased cost for eco-friendly green growth, and as the current electric charges are much lower than the sustainable level, cumulative deficits are growing. As a result, for KEPCO to proactively pursue green growth policies, I believe, the tariff system must be rationalized and the recovery of the expenses necessary for low-carbon green growth must be allowed.



Third party  
assurance
**Won-Hyeok Lim**

Head of the Global Economic Research Center,  
Korea Development Institute

**Prior suggestions**

- To understand the impact of KEPCO's business on the sustainable development of the national economy, it is not enough to look at the domestic and overseas business. Creation and distribution of economic values, risks and opportunities due to climate change or aging, and employment, purchasing and public-interest investments of major operations must be taken into consideration comprehensively.

**Follow-up suggestions**

- It is necessary to include contents related to the sustainable development of the national economy as well as the performance of KEPCO's domestic and overseas business.

The foundation of sustainability management is management. No matter how hard a company tries to take the lead in environmental protection and social contributions, and enhance its image, its existence will be cast into doubt if these endeavors are not supported by solid management. I'd like to emphasize that sustainable power generation, which is a higher-level concept of sustainability management, must ensure substantive power generation encompassing economic, environmental and social aspects.

- It is necessary to introduce the economic contributions of KEPCO as well as its social and environmental performance.

KEPCO has been highlighting its image as a company giving light and hope to society by pursuing green growth business and spreading the culture of sharing. Now it's high time to pay more attention to factors greatly affecting its management. For instance, KEPCO must analyze opportunities and risk factors related to climate change, nuclear power generation, population structure and overseas expansion, come up with countermeasures, and reflect them in the sustainability report. Also, it will be desirable to emphasize its economic contributions due to job creation at domestic and overseas sites and cooperation with SMEs as well as contents related to government subsidies.

- It must be possible to extend the horizon of the key performance indicators (KPI) of sustainability management to include the economic performance of sustainable power generation, and present mid-term goals as well as showing latest trends.

The current KPIs show the performance of the past three years and the goals of the following one year. It is desirable to extend them, and analyze the performance trends of the past five years, and show the goals of the next five years.

Third party  
assurance**Geo-Seong Kim**

Chairman, Transparency International Korea

**Prior suggestions**

- KEPCO needs to pay as much attention to risk prevention as risk management.
- Description of internal education and policy implementation related to the Business Principles Countering Bribery proposed by Transparency International
- Introduction of corporate social responsibility (CSR) as a more comprehensive and proactive concept than 'social contribution'

**Follow-up suggestions**

- Sustainability Report 2011 includes information of importance to stakeholders, and provides a sufficient description of matters they are interested in.

I believe that KEPCO's anti-corruption policies have been very effective, but management of its subsidiaries like KHNP must be further reinforced. As described in the report, KEPCO received the top score from the Anti-Corruption & Civil Rights Commission in 2010 among the public corporations that were investigated, and received the highest grade in the evaluation of anti-corruption policies for 6 years in a row. I believe that this is a remarkable achievement. Also, given that many stakeholders, particularly suppliers, are taking part in human rights, labor, environment and anti-corruption as principals of ethical management, KEPCO can become a role model for other companies. However, the fact that corruptions related to NPPs are taking place at KHNP, one of its subsidiaries, implies that the fight against corruption must be escalated to the Power Group. KEPCO needs to further reinforce its policy for preventing bribery by accommodating the 'Business Principles Countering Bribery' proposed by Transparency International in order to help the anti-corruption culture take a firm root.

- **More efforts must be made to ensure the safety of nuclear power plants.**

The Fukushima nuclear power plant accident, which was caused by the earthquake in Japan in March 2011, is not resolved yet, and it is difficult to measure the scale of damage accurately. KEPCO needs to sufficiently introduce stakeholders' concern over the damage from nuclear power plant accidents, and describe recent accidents. In the long run, it seems desirable to re-examine domestic and overseas NPP projects in consideration of the risks of accidents and the cost of shutdown at the time of project closing.

- **The culture of gender equality is taking root**

This report reveals that the portion of female workers at KEPCO is gradually rising, and female managers are continuously increasing, and it is compensating males and females fairly. It proves that KEPCO is moving in the right direction in Korea where the gender equality index is very poor. I propose that KEPCO will take after overseas utility businesses like GDF Suez, and prepare a realistic timetable so that it can gradually increase the portion of female workers in directors, executives, new recruits and core jobs by a certain point in time.

## GRI Index

Reporting level: ● Fully ○ Partially × Not reported N/A

No.	Description	Page	Reporting level	Remarks
<b>Strategy and analysis</b>				
1.1	Statement from the most senior decision maker of the organization about the relevance of sustainability to the organization and its strategy	11	●	
1.2	Description of key impacts, risks, and opportunities	27	●	
<b>Organizational profile</b>				
2.1	Name of the organization	15	●	
2.2	Primary brands, products, and/or services	14	●	
2.3	Operational structure of the organization	16,17	●	
2.4	Location of organization's headquarters	16,17	●	
2.5	Countries where the organization operates	18	●	
2.6	Nature of ownership and legal form	15	●	
2.7	Markets served	14	●	
2.8	Scale of the reporting organization	16	●	
2.9	Significant changes regarding size, structure, or ownership	1	●	
2.10	Awards received	81	●	
<b>Report parameters</b>				
3.1	Reporting period	1	●	
3.2	Date of most recent previous report	1	●	
3.3	Reporting cycle	1	●	
3.4	Contact point for questions regarding the report or its contents	84	●	
3.5	Process for defining report content	24	●	
3.6	Boundary of the report	1	●	
3.7	Limitations on the scope or boundary of the report	1	●	
3.8	Basis for reporting on joint ventures, subsidiaries, and other entities that can significantly affect comparability from period to period	1	●	
3.9	Data measurement techniques and the bases of calculations	1	●	
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement	1	●	
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report	1	●	
3.12	Table identifying the location of the Standard Disclosures in the report	73	●	
3.13	External assurance for the report	70	●	
<b>Governance, commitments and engagement</b>				
4.1	Governance structure of the organization	26	●	
4.2	Indicate whether the Chair of the BOD is also an executive officer	26	●	
4.3	Number of members of the BOD that are independent and/or non-executive members	26	●	
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the BOD	26	●	
4.5	Linkage between compensation for members of the BOD and executives and the organization's performance	26	●	
4.6	Processes in place for the BOD to ensure conflicts of interest are avoided	26	●	
4.7	Process for determining the qualifications and expertise of the members of the BOD	26	●	
4.8	Statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance	22,23	●	
4.9	Procedures of the BOD for overseeing the organization's identification and management of economic, environmental, and social performance	26	●	
4.10	Processes for evaluating the BOD's own performance, particularly with respect to economic, environmental, and social performance	26	●	
4.11	Precautionary approach or principle addressed by the organization	26,38	○	
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses	81	●	
4.13	Memberships in associations and/or national/international advocacy organizations	81	●	
4.14	List of stakeholder groups engaged by the organization	24	●	
4.15	Basis for identification and selection of stakeholders with whom to engage	52	○	
4.16	Approaches to stakeholder engagement	24	●	
4.17	Key topics and concerns that have been raised through stakeholder engagement	24	●	

## GRI Index

Reporting level: ● Fully ○ Partially x Not reported N/A

No.	Description	Page	Reporting level	Remarks
<b>Economic performance</b>				
EC1	Direct economic value generated and distributed	30	●	
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	27	●	
EC3	Coverage of the organization's defined benefit plan obligations	61	●	
EC4	Significant financial assistance received from government	31	●	
EC5	Ratios of standard entry level wage compared to local minimum wage at significant locations of operation	33	●	
EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation	53	●	
EC7	Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation	33	●	
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit	57	●	
EC9	Significant indirect economic impacts	52,53	○	
<b>Environmental performance</b>				
EN1	Materials used by weight or volume	46	●	
EN2	Percentage of materials used that are recycled input materials	46	●	
EN3	Direct energy consumption by primary energy source	40	●	
EN4	Indirect energy consumption by primary source	40	●	GENCO's Performance
EN5	Energy saved due to conservation and efficiency improvements	40	●	
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives	40	●	
EN7	Initiatives to reduce indirect energy consumption and reductions achieved	44	●	
EN8	Total water withdrawal by source	40	●	
EN9	Water sources significantly affected by withdrawal of water	-	N/A	Used Tapped Water 100%
EN10	Percentage and total volume of water recycled and reused	40	●	
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	43	○	
EN12	Significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	43	○	
EN13	Habitats protected or restored	-	N/A	
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity	43	●	
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations	-	N/A	The entire nation is affected by operations
EN16	Total direct and indirect greenhouse gas emissions by weight	49	●	
EN17	Other relevant indirect greenhouse gas emissions by weight Initiatives to reduce greenhouse gas emissions and reductions achieved	49	●	
EN18	Emissions of ozone-depleting substances by weight	49	●	
EN19	NOx, SOx, and other significant air emissions by type and weight	49	●	
EN20	Total water discharge by quality and destination	42	●	
EN21	Total weight of waste by type and disposal method	42	●	
EN22	Total number and volume of significant spills	46	●	
EN23	Weight of transported, imported, exported, or treated waste deemed hazardous	49	●	
EN24	under the terms of the Basel Convention	46	○	
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff	40	●	
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	40	●	
EN27	Percentage of products sold and their packaging materials that are reclaimed by category	-	N/A	
EN28	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations	-	N/A	
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce	40	●	
EN30	Total environmental protection expenditures and investments by type	40	●	

## GRI Index

Reporting level: ● Fully ◐ Partially ✕ Not reported N/A

No.	Description	Page	Reporting level	Remarks
<b>Labor performance</b>				
LA1	Total environmental protection expenditures and investments by type	61	●	
LA2	Total number and rate of employee turnover	65	●	
LA3	Benefits provided to full-time employees	66	●	
LA4	Percentage of employees covered by collective bargaining agreements	67	●	
LA5	Minimum notice period(s) regarding operational changes	67	●	
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees	63	●	
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region	63	●	
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases	63	●	
LA9	Health and safety topics covered in formal agreements with trade unions	62-63	●	
LA10	Average hours of training per year per employee by employee category Programs for skills management and lifelong learning that support the continued	64	●	
LA11	employability of employees and assist them in managing career endings	64	●	
LA12	Percentage of employees receiving regular performance and career development reviews	65	●	
LA13	Composition of governance bodies and breakdown of employees per category	61	●	
LA14	Ratio of basic salary of men to women by employee category	61	●	
<b>Human rights performance</b>				
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening	53	◐	
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken	53	●	
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights	62	●	
HR4	Total number of incidents of discrimination and actions taken	62	●	
HR5	Right to exercise freedom of association and collective bargaining	63	●	
HR6	Measures taken to contribute to the elimination of child labor	62	●	
HR7	Measures to contribute to the elimination of forced or compulsory labor	62	●	
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights	62	●	
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken	33	●	
<b>Social performance</b>				
S01	Programs and practices that assess and manage the impacts of operations on communities	42	●	
S02	Percentage and total number of business units analyzed for risks related to corruption	59	●	
S03	Percentage of employees trained in organization's anti-corruption policies and procedures	58,59	●	
S04	Actions taken in response to incidents of corruption	58,59	●	
S05	Public policy positions and participation in public policy development and lobbying	-	N/A	
S06	Total value of financial and in-kind contributions to political parties, politicians, and related institutions	-	N/A	
S07	Total number of legal actions for anticompetitive behavior, anti-trust, and monopoly practices and their outcomes	54	●	
S08	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with laws and regulations	54	●	
<b>Product responsibility</b>				
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement	43	◐	
PR2	Total number of incidents of non-compliance with regulations concerning health and safety impacts of products and services	-	N/A	
PR3	Type of product and service information required by procedures	31	●	
PR4	Total number of incidents of non-compliance with regulations concerning product and service information and labeling	-	N/A	
PR5	Practices related to customer satisfaction	52	◐	
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications	52	●	
PR7	Total number of incidents of non-compliance with regulations concerning marketing communications	-	N/A	
PR8	Total number of substantiated complaints regarding breaches of customer information protection	62	●	
PR9	Monetary value of significant fines for noncompliance with laws and regulations concerning the provision and use of products and services	-	N/A	

Core subject	Issue	Description	Page
<b>Organizational governance</b>			
6.2.3	Decision-making processes and structures	Board of directors, remuneration of directors, audit committee	26
<b>Human rights</b>			
6.3.3	Due diligence	Audit committee, ethical management, respect for human rights	26,59-60,62
6.3.4	Human rights risk situations	Respect for human rights, risk management	62
6.3.5	Avoidance of complicity	Improved suppliers satisfaction, fair contracting process	55
6.3.6	Resolving grievances	Mutual trust between labor-management, dealing with employee grievances, protection of customer rights and interests	52,62,68
6.3.7	Discrimination and vulnerable groups	Discrimination eradication, gender equality, hiring the vulnerable to employment, performance evaluation	62
6.3.8	Civil and political rights	Respect for human rights, mutual trust between labor-management	62,68
6.3.9	Economic, social and cultural rights	Social contributions, employee safety & welfare	56-58,63-65,67-68
6.3.10	Fundamental principles and rights at work	Respect for human rights, employee safety & welfare	62-64,67-68
<b>Labor practices</b>			
6.4.3	Employment and employment relationships	Respect for human rights, employee safety & welfare	62-64,67-68
6.4.4	Conditions of work and social protection	Respect for human rights, employee safety & welfare	62-64,67-68
6.4.5	Social dialogue	Employee safety & welfare	63-64,67-68
6.4.6	Health and safety at work	Employee safety & welfare	62-64,67-68
6.4.7	Human development and training in the workplace	Human resource development	65-66
<b>Environment</b>			
6.5.3	Prevention of pollution	Resource recycling and hazardous substance control	46
6.5.4	Sustainable resource use	Resource recycling and hazardous substance control	46
6.5.5	Climate change mitigation and action	Response to the convention on climate change, GHG reduction efforts	47-49
6.5.6	Protection of the environment & biodiversity, and restoration of natural habitat	Eco-friendlier power supply chain (transmission), social contributions	41-49
<b>Fair operating practices</b>			
6.6.3	Anti-corruption	Ethical management	59-61
6.6.4	Responsible political involvement	N/A	-
6.6.5	Fair competition	Win-win growth with suppliers, contributing to the nation & society	53-55
6.6.6	Promoting social responsibility in the value chain	Win-win growth with suppliers, social contributions	53-58
6.6.7	Respect for property rights	Win-win growth with suppliers	53-55
<b>Consumer issues</b>			
6.7.3	Fair marketing, factual and unbiased information and fair contractual practices	Protection of customer rights and interests	53
6.7.4	Protecting consumers' health & safety	Resource recycling and hazardous substance control, employee safety & welfare	63-64
6.7.5	Sustainable consumption	Smart grid, development of low-carbon green power technologies	34
6.7.6	Consumer service, support and complaint and dispute resolution	Protection of customer rights and interests	53
6.7.7	Consumer data protection and privacy	Customer privacy protection	52
6.7.8	Access to essential services	Basic right to energy	57
6.7.9	Education and awareness	Protection of customer rights and interests, customer health and safety	53,63-64
<b>Community involvement and development</b>			
6.8.3	Community involvement	Social contributions	56-58
6.8.4	Education and culture	Social contributions	56-58
6.8.5	Employment creation and skills development	Contributing to the nation & society, social contributions	56-58,65
6.8.6	Technology development and access	Social contributions	56-58
6.8.7	Wealth and income creation	Win-win growth with suppliers, contributing to the nation & society	53-55
6.8.8	Health	Employee safety & welfare	63-64
6.8.9	Social investment	Social contributions	56-58

Financial  
information-Consolidated  
financial  
Statement

(Unit: KRW million)

Items	2011	2010
<b>Assets</b>		
Current assets	14,125,902	13,156,402
Non-current assets	122,341,948	116,361,392
<b>Total Assets</b>	<b>136,467,850</b>	<b>129,517,794</b>
<b>Liabilities</b>		
Current liabilities	17,741,167	14,072,173
Non-current liabilities	64,922,733	58,169,084
<b>Total liabilities</b>	<b>82,663,900</b>	<b>72,241,257</b>
<b>Equity</b>		
Contributed Capital	4,053,578	4,042,979
Retained Earnings	35,769,094	39,296,232
Other Components of Equity	13,447,624	13,478,767
Equity attributable to Owners of the Company	53,270,296	56,817,978
Non-Controlling Interests	533,654	458,559
<b>Total Equity</b>	<b>53,803,950</b>	<b>57,276,537</b>
<b>Total liabilities and Equity</b>	<b>136,467,850</b>	<b>129,517,794</b>

(Unit: KRW million)

-Consolidated  
Statements of  
Comprehensive  
Income

Items	2011	2010
1. Sales	43,532,302	39,506,582
2. Cost of sales	43,081,979	36,187,237
3. Other operating income	598,303	536,915
4. Selling and administrative expenses	1,751,697	1,644,760
5. Other operating expenses	147,595	69,787
6. Other income(Loss)	165,703	118,207
7. Operating income(Loss)	-684,963	2,259,920
8. Finance income	607,592	591,491
9. Finance expenses	2,518,850	2,558,425
10. Profits of associated and joint ventures using equity method	123,095	76,626
11. Income(Loss) before income tax	-2,473,126	369,612
12. Income tax expenses	819,871	438,779
13. Net Loss for the year	-3,292,997	-69,167
14. Other comprehensive income(Loss)	-262,158	-42,567
<b>15. Total comprehensive loss for the year</b>	<b>-3,555,155</b>	<b>-111,734</b>

KEPCO group  
companies**Korea Hydro & Nuclear Power  
Co., Ltd. (KHNP)**

- Installed capacity : 24,021MW
- Power generation : 159,428GWh
- Employees : 8,990
- Revenues : 66,119billion

KHNP is operating nuclear power plants as base load power plants and hydroelectric plants as peak load power plants. KHNP has currently 21 units in operation, including Kori Unit 1, which started commercial operation in 1978. KHNP is the world's 5th largest nuclear power company, responsible for approximately 32.1% of the national power supply. KHNP has recorded a capacity factor in excess of 90% for 11 consecutive years since 2000. The capacity factor in 2011 was 90.7%, higher than the global average. As of the end of December, 2011, KHNP has 24,021MW of installed capacity, which breaks down as 18,716MW of 21 nuclear (77.9%) units, 592MW of 21 hydroelectric units (2.5%), and 4,700MW for 16 pumped storage units (19.6%). According to the long-term electric power supply plan, KHNP is constructing 7 NPP's (8,600MW) (Shinkori 2, Shinkori 3 & 4, Shinwolsong 1 & 2, and Shinwuljin 1 & 2).

**Korea South-East Power  
Co., Ltd. (KOSEP)**

- Installed capacity: 8,396MW
- Power generation: 61,145GWh
- Employees : 1,872
- Revenues: 43,888billion

KOSEP is operating the Samcheonpo Thermal Power Site and Yeongheung Thermal Power Site as base load plants. As of the end of December 2011, KOSEP has an installed capacity of 8,976MW, which includes 6,909MW for 11 bituminous coal units (82.3%), 922MW for 10 LNG combined cycle units (11%), 200MW for one oil units (2.4%) and 325MW for two anthracite units (3.9%). According to the long-term electric power supply plan, KOSEP is constructing Yeongheung Thermoelectric Units No. 5 and 6 (1,740MW).

**Korea Midland Power  
Co., Ltd. (KOMIPO)**

- Installed capacity: 7,949MW
- Power generation: 53,815GWh
- Employees : 2,135
- Revenues: 50,327billion

KOMIPO is operating the Boryeong Thermal Power Site and the Seocheon Thermal Power Plant as base load plants. As of the end of December 2011, KOMIPO has the installed capacity of 7,949MW, which breaks down as 4,000MW for eight bituminous coal units (50.3%), 3,250MW for 19 LNG combined cycle units (40.9%), 400MW for two anthracite units (4.3%), and 285MW for five oil units (3.6%).

**Korea Western Power  
Co., Ltd. (WP)**

- Installed capacity: 8,404MW
- Power generation: 54,185GWh
- Employees : 1,725
- Revenues: 52,045billion

WP is operating the Taean Thermal Power Site as the base load plant. As of the end of December, 2011, WP has the installed capacity of 8,404MW, which includes 4,000MW for eight bituminous coal units (47.6%), 2,998MW for 24 LNG combined cycle units (35.7%), and 1,400MW for four oil units (16.7%).

**Korea Southern Power  
Co., Ltd. (KOSPO)**

- Installed capacity: 9,239MW
- Power generation: 60,334GWh
- Employees : 1,726
- Revenues: 59,107billion

KOSPO is operating the Hadong Thermal Power Site as the base load plant. As of the end of December, 2011, KOSPO has the installed capacity of 9,239MW, which breaks down as 4,000MW for eight bituminous coal units (43.3%), 4,448MW for 28 LNG combined cycle units (48.1%), 745MW for 11 oil units (8.1%), and 41MW for 19 wind units (0.4%).

**Korea East-West Power  
Co., Ltd. (EWP)**

- Installed capacity: 8,815MW
- Power generation: 53,637GWh
- Employees : 1,977
- Revenues: 48,130billion

EWP is operating the Dangjin Thermal Power Site and Honam Thermal Power Plant as base load plants. As of the end of December, 2011, EWP has an installed capacity of 8,815MW, which includes 4,500MW for 10 bituminous coal units (51.0%), 2,100MW for 17 LNG combined cycle units (23.8%), 1,800MW for six oil units (20.4%), and 400MW for two anthracite units (4.5%).



## KEPCO group companies



### KEPCO Engineering & Construction Company, Inc. (KEPCO E&C)

- Address: 2354 Yonggudaero, Giheung-gu, Yongin-si, Gyeonggi-do
- Homepage: [www.kepco-enc.com](http://www.kepco-enc.com)

KEPCO Engineering & Construction (KEPCO E&C) was founded in 1975 to attain self-sufficiency in design technology for nuclear, hydroelectric and thermal power plants. Since then, KEPCO E&C has grown into a world-class nuclear power plant design company. The Korean Standard Nuclear Power Plant OPR1000 and APR1400 are rated as top-tier nuclear power reactors in terms of economy and safety. KEPCO E&C has also enhanced the performance and economy of a standardized 500MW coal-fired power plant, and started commercial operation of an 800MW thermal power plant, an upgraded version of the 500MW model. In addition, KEPCO E&C's project management (PM) and construction management (CM) technology is considered among Korea's best. Recently, KEPCO E&C advanced into the highly potential environmental market with the world's first low-temperature desulfurization technology.



### KEPCO Plant Service & Engineering Co., Ltd. (KPS)

- Address: Jeongjail-ro 45, Bundang-gu, Seongnam-si, Gyeonggi-do
- Homepage: [www.kps.co.kr](http://www.kps.co.kr)

KEPCO Plant Service & Engineering (KPS) is an integrated plant service company, providing high-quality maintenance services for power plants, transmission & substations, and industrial facilities. KPS is responsible for commissioning maintenance of power plants under construction, and ordinary maintenance, planned outage and other repair & maintenance of power plants in operation, contributing to preventing unplanned shutdowns and improving the capacity factor. KPS also offers total maintenance services for transmission and substation facilities such as transmission facility maintenance, live wire maintenance, underwater HVDC cable and conversion facility maintenance, design, construction, supervision and safety service of electric power facilities.



### KEPCO Nuclear Fuel Co., Ltd. (KNF)

- Address: 989-242, Daedeokdaero, Yuseong-gu, Daejeon
- Homepage: [www.knfc.co.kr](http://www.knfc.co.kr)

KEPCO Nuclear Fuel (KEPCO NF) is a nuclear fuel cycle company, providing nuclear fuel design, manufacturing & engineering services. KEPCO NF is the world's only producer of nuclear fuel both for PWR and CANDU reactors. KEPCO NF has developed and commercially supplied PLUS7™ for Korean Standard Nuclear Power Plants (KSNP) and ACE7™ for Westinghouse models, helping to increase power plant output power and reduce nuclear fuel cycle cost, thereby raising the operational economy of nuclear power plants.



### KEPCO Knowledge, Data & Network Co., Ltd. (KDN)

- Address: 60, 72-gil, Hyoryeong-ro, Seocho-gu, Seoul
- Homepage: [www.kdn.com](http://www.kdn.com)

KEPCO Knowledge, Data & Network (KEPCO KDN) was founded as a KEPCO IT provider in 1992. Since then, KEPCO KDN has offered total IT services ranging from generation, transmission & substations, and distribution to sales, growing into a global electric power IT company. KEPCO KDN has mainly engaged in the business of deployment/operation of information systems, automation of electric power IT, deployment and maintenance of IT infrastructure and consigned management of distribution facilities. KEPCO KDN is now striving to enhance PLC and RFID technologies with an aim to provide ubiquitous electric power services.



## Awards received & initiatives joined

Date	Awards received in 2011	Institute
May 2011	Korea Technology Innovation Management Awards	The Korea Economic Daily
June 2011	Gold Award, International Exhibition of Inventions, Pittsburg, USA	-
September 2011	IR52 Jang Young Shil Award	Korea Industrial Technology Association The Board of Audit and Inspection of Korea
September 2011	Named the best institution in self-audit	Korea EA (Enterprise Architecture)
October 2011	'EA' grand prize 2011	Association
October 2011	Grand prize in national standardization	President
October 2011	Gold Award, International Exhibition of Inventions, Germany	Exhibition of Inventions , Nuremberg, Germany
November 2011	National green technology award	Ministry of Environment
December 2011	Gold Award, International Exhibition of Inventions, Seoul	-
January 2011	Received the highest grade in the evaluation of anti-corruption policies for 6 years in a row	-
December 2011	Ranked No.1 in the Government's Customer Satisfaction Survey for public corporations for thirteen years in a row	-

## Major initiatives joined

Date	Initiative
June 2005	Transparent Society Pact between KICAC and the CEOs of 18 public corporations
July 2005	Renewable Portfolio Agreement with the Ministry of Commerce, Industry and Energy
August 2005	Agreement to comply with the 10 Principles of UN Global Compact
September 2005	Transparent Society Pact in the Electric Power Sector among 11 KEPCO Group companies and the representative of major electric power companies
January 2006	Integrity Pact between KEPCO and business partners (1,579 companies/18,135 persons participated)
June 2007	Agreement with private-sector organizations on business cooperation in the area of the environment (UNEP National Committee for Korea, Korea Green Foundation, Korea Women's Environmental Network)
July 2009	Renewable Portfolio Agreement II with the Ministry of Knowledge Economy
December 2009	Accession to UN Global Compact in Korea

## National & international memberships in associations

Date	Name	Objective
1961	Korean Institute of Electrical Engineers	Promotion and development of academics and technology related to electrical engineering
1964	Korea Standard Association	Exchange of information on technological standards, including industrial standardization and quality management
1965	Korea Electric Association	Promotion and development of electric industry
1969	Korean Member Committee of the World Energy Council	Enhancement of international relationship in the energy area
1975	Korea Atomic Industrial Forum	Exchange of nuclear technology at home and abroad
1989	Korea Electrical Engineering & Science Research Institute	Basic research and nurturing of human resources with regard to electric power industry
1995	Korean Society for Quality Management	Exchange of information among quality management organizations to improve quality management activities
1995	Korea Nuclear Society	Technology development and academic exchange with regard to nuclear power
1996	Korean Institute of Electrical & Electronic Material Engineering	Academic exchange and cooperation between industry and academia regarding electrical and electronic material engineering
1998	AESIEAP	Cooperation among electric power companies & experts of East Asia and the Western Pacific
2004	EEL	Protection of the rights of US electric power companies and provision of information on the electric power industry
2008	AEIC	Technological exchange among electric power companies in North America
2009	Korea Invention Promotion Association	Exchange of needs and trends of IPR market

1. AESIEAP: Association of the Electricity Supply Industry of East Asia and the Western Pacific
2. EEL: Edison Electric Institute
3. AEIC: Association of Edison Illuminating Companies

## Glossary

- Gas Insulated Switch Gear (GIS)**  
A complex switching device which opens or closes an electric circuit which is insulated with sulfur hexafluoride (SF<sub>6</sub>) gas
- Community Energy System (CES)**  
A type of power business that generates electricity using a small-capacity generator and supplies electricity to users within the designated district directly without going through the power exchange market
- Base Load Generator**  
A generator which keeps running at a constant output due to little output adjustment according to demand control. Currently coal-fired thermal power generators and nuclear power generators are running as base load generators
- Emissions Trading System (ETS)**  
The system that sets the total quantity of greenhouse gas emissions of all advanced nations and imposes a certain amount of emission quotas. Countries exceeding the quota can purchase emission rights and those under the quota can sell emissions
- Load Factor**  
The ratio of average power as compared with the peak power during a given period. Used as the indicator representing the efficiency of power facilities
- Demand Control**  
All the activities to satisfy electricity demand at a minimal cost by changing customers' electricity use patterns. Load control and energy efficiency improvement are major methods for demand control
- Transmission & Distribution Loss**  
Electricity loss incurred while electric power flows from power plant to substation, transmission/distribution lines, and finally point of consumption, mainly due to resistance
- Smart Grid**  
"Smart grid" refers to an electric power grid that incorporates information & communication technologies to maximize efficiency for greater eco-friendliness
- Renewable Portfolio Agreement (RPS)**  
Regulation that requires the increased production of energy from renewable energy sources
- Energy Intensity**  
Energy consumption per US\$ 1,000 of GDP
- Electricity Reserve Rate**  
Electric power in reserve against contingencies or to meet sudden surges in electricity demand
- Greenhouse gases**  
Elements of air generated either naturally or artificially, which may contribute to global warming when there is an excessive increase of their proportion in the atmosphere. Refers to gases like carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), chlorofluorocarbon (CFC), nitrous oxide (N<sub>2</sub>O), and sulfur hexafluoride (SF<sub>6</sub>)

## Glossary

- Electric Quality**  
The quality of electricity provided is represented as Outage time, voltage & frequency margin and total harmonic distortion (THD)
- Electricity Effect Valuation System**  
A technique to select ideal sites for constructing transmission and substation facilities. Quantifies the effect of electricity on the natural, social and technology environment by using GIS and CAD and analyzes the weighted importance of the effect. Results are rendered in 3D images
- Self-Sufficiency Rate**  
KEPCO defines Self-Sufficiency Rate as the ratio of the amount of a given fuel secured to the amount of a given fuel required
- Ice Storage Cooling Facility**  
An advanced cooling system that stores ice or cold water by using off-peak electricity during the night and uses it for cooling during the day. Distributes the increasing cooling load to the night time zone and helps improve load imbalance between day and night
- Certified Emission Reduction (CER)**  
CERs are carbon credits issued by the CDM Executive Board for emission reductions achieved by CDM projects
- Clean Development Mechanism (CDM)**  
An arrangement allowing industrialized countries with a greenhouse gas reduction commitment to invest in projects that reduce emissions in developing countries as an alternative to more expensive emission reductions in their own countries
- C-km (Circuit Kilometer)**  
Length of one cable made up of three lines. One of the most generally used units for the length of transmission line
- Global Compact**  
UN Secretary-General Kofi Annan presented 10 universal principles in the areas of human rights, labor, the environment and anti-corruption, calling for business leaders to join an initiative called the Global Compact aimed at promoting business transparency and corporate social responsibility. The operational phase of the initiative was launched at UN Headquarters in July 2000
- Global Reporting Initiative (GRI)**  
A body of the United Nations Environmental Programme in charge of developing globally applicable guidelines for sustainability reporting
- SF<sub>6</sub> Gas**  
SF<sub>6</sub> gas is used as insulation medium for GIS. The impact of SF<sub>6</sub> gas on global warming is app. 25,000 times more than CO<sub>2</sub>
- TOE (Ton of Oil Equivalent)**  
Unit converted on the basis of the caloric value of 1 ton of oil

## Additional information

Sustainability Reports including this one and Annual Reports can be downloaded on the website of KEPCO. Additional information of the management of KEPCO is available on the websites below. Expressions such as forecast, expect and estimate is a description of the analysis of the future as of today. Therefore, for specific risk or uncertainty, please refer to Form 20-F.

Classification	Website	Address
Business Report	Financial Supervisory Service's DART (data analysis, retrieval and transfer system)/company overview	dart.fss.or.kr
Form 20F	US Securities and Exchange Commission	www.sec.gov
Annual Report	KEPCO homepage/Investor relations/management	www.kepco.co.kr
Statistics of Electric Power in Korea	KEPCO homepage/Investor relations/ Investor resources/Statistics of electricity	www.kepco.co.kr
Social contribution	KEPCO homepage/Sustainability	www.kepco.co.kr
Management Information of Public Institutions	Public Institution Information Management System, the Ministry of Strategy and Finance	www.alio.go.kr

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## Reader feedback

Your valuable feedback on 2012 KEPCO Sustainability Report will be used to improve the quality of our sustainability management and sustainability reports. Please send us your feedback by posting on KEPCO website or by e-mail/postal mail.



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