

### About 2009 Sustainability Report

#### Purpose

Korea Electric Power Corporation (KEPCO) has contributed to improving the welfare of the nation's people by realizing reliable supply of quality electric power. This report describes KEPCO's efforts and achievements in 4 major areas of sustainability management – economy, environment, society and human resources.

From this report, our stakeholders can learn about how KEPCO continues to grow with hope, life, love and happiness.

#### Guidelines

This report was prepared in accordance with the GRI Guidelines 2006 (G3) as well as the report quality control guidelines.

From 2005, KEPCO publishes a sustainability report every year, disclosing it through Korea Exchange, and submitting it to the UN GRI and the Global Compact. Also, KEPCO makes the report available to the National Assembly, the government, academia, NGOs, suppliers and other various stakeholders at home and abroad.

#### Coverage

This report contains quantitative performance data pertaining to the period starting from January 1, 2008 through December 31, 2008. In addition, some of the non-quantitative descriptions include data on performance leading up to June 2009.

Further, this report covers the sustainability management performance of KEPCO. However, part of the Environment section of this report includes the performance of the six power generation subsidiaries, or GENCOs (Korea Hydro and Nuclear Power, Korea South-East Power, Korea Midland Power, Korea Western Power, Korea Southern Power and Korea East-West Power), wholly owned by KEPCO.

To ensure that all of KEPCO group companies pursue sustainability management in a consistent manner, GENCOs are already publishing sustainability reports individually, and all of the group companies are the signatories of the UN Global Compact.

#### Major Changes & Scope

There was no significant change in corporate size, ownership structure, business, etc. during the period subject to this report. KEPCO faithfully incorporated all indicators set forth by the GRI Guidelines 2006[G3] in this report, and included the indicators of stakeholders engagement [P67] as well. To improve the performance of sustainability management, it also discloses key performance indexes of 3 years.

#### Commitment to credibility

In an effort to ensure the credibility of the report, KEPCO invited three external experts to review the report over the three stages of report preparation. The details of the review are found in the section entitled "Third Party Review" in page 58.



KEPCO SR 2006



KEPCO SR 2007



KEPCO SR 2008



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## All of us at KEPCO are preparing for a brighter tomorrow, seeking a new vision

## "Global Top 5 Utility for Green Energy"

Dear our stakeholders from around the world.

I deeply appreciate KEPCO stakeholders' unwavering encouragement and support for our effort to become a torch for hope that lights up the world.

Since the first electric lamp was switched on in Geoncheonggung, Gyeongbok Palace in 1887, KEPCO has been serving as a driving force behind the development of the national economy and improvement of people's living standards by ensuring reliable electric power supply. Faithfully fulfilling its role of a public enterprise, KEPCO is growing and developing into a global energy company through constant changes and innovation.

KEPCO has not only contributed to the development of the national economy, but also fully understood the necessity of sustainable growth, which is built on fulfillment of corporate social responsibility, environment preservation, and respect for human dignity. Therefore, in 2005, KEPCO signed the UN Global Compact on the Convention on the Climate Change and issues sustainability report every year. We will stay committed to performing the role of a corporate citizen as well as becoming a global leading energy group through strenuous and persistent efforts as follows:

First, KEPCO will enhance corporate values through constant innovation and creation of new added values, to bring economic benefits to all stakeholders.

Faced with unprecedented challenges such as soaring prices of generation fuels and high foreign exchange rates in 2008, all of us at KEPCO made concerted efforts to overcome the crisis, specifically focusing on reducing costs and improving revenues. Theses efforts enabled us to absorb about 4% of the causes of electricity tariff increase internally. Furthermore, aggressively pursuing overseas business, we won the orders of overseas power plant projects totaling about USD 5.5 billion, and thereby consolidated our status in global market, KEPCO will strive to become Global Top 5 Utility with total revenues of KRW 85 trillion by shifting its focus from the domestic electricity industry towards overseas markets and seeking diversification of business based on accumulated skills and knowhow.

Second, KEPCO will actively deal with environmental issues such as depletion of natural resources and climate changes attributed to greenhouse gas emissions, and take the lead in realizing green growth to create future growth engines by developing eco-friendly technologies,

Fully aware of the necessity of urgent response to environmental issues such as global warming, KEPCO is persistently striving to protect the environment and ecosystems. To respond to environmental issues and realize sustainable growth,

KEPCO has set the mid-to long-term objectives of developing 8 green technologies in electricity area, including IGCC, infrastructures for charging electric vehicles, and power plants designed for overseas market. We will invest KRW 3.2 trillion in developing and commercializing these technologies by 2020. At the same time, we will take the lead in building the Smart Grid, a project that is expected to bring a phenomenal transformation to the landscape of the electric power industry, becoming the leader of green management.

Third, we will exert effort to make sure that ethical management will take root at KEPCO group companies, thereby enhancing management transparency. Moreover, KEPCO, as a corporate citizen, will be committed to achieving customer-oriented management and also faithfully fulfilling social responsibilities, giving greater care and support to the underprivileged in society

As a result of our strenuous efforts to realize transparent management, KEPCO made tangible results in making ethical management take root at the company. KEPCO was named as the best organization in anti-corruption policy evaluation for three consecutive years and ranked first in the survey on integrity of public enterprises. In addition, we ranked top of the surveys on customer satisfaction regarding public enterprises for ten consecutive years, which is attributed to our continuous effort to improve our services and system in a way that can increase the conveniences of customers. Rather than being complacent with these accomplishments, however, we will stay committed to our goal Clean KEPCO that puts customers first. Also, we will continuously pursue various social activities for the underprivileged.

Forth, KEPCO will strive further to improve the quality of life through human-oriented management, cultivate globally competitive talents, and protect human rights.

We will maximize our organizational potentials and capabilities by creating a corporate culture built on mutual trust and sharing practical knowledge among employees. Furthermore, we aim to enhance our competitiveness in the global stage by nurturing human resources equipped with creativity and entrepreneurship. At the same time, we will strive to establish a constructive labor-management relationship that can serve as the foundations for corporate growth, and improve the quality of life by ensuring a work-life balance.

Going forwards, KEPCO will endeavor to make sure that the rationale and necessity of sustainability management will be shared amongst all employees, and faithfully fulfill our social responsibility as a corporate citizen.

I look forwards to your greater interest in and support for us.

Thank you.

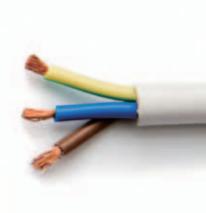
October 2009 President/CEO of KEPCO

Ssang-Su Kim

# **KEPCO** Sustainability Management Principles







### **KEPCO** Sustainability Management Principles

All of us at KEPCO are committed to fulfilling corporate social responsibility as a leading enterprise in the electric power industry in Korea, thereby contributing to sustainable development of the country, society as well as human resources. We hereby pledge to make the company a world-class electric power company growing with customers by practicing sustainability management in economic, environmental, social and human resources areas that highly values all stakeholders.

#### **Economy: Sustainable Growth**

KEPCO will secure competitive advantages in the global market and build future growth engines based on challenging, creative and forward-looking thinking, and raise corporate value by maintaining a sound financial structure.

KEPCO will continue to enhance management efficiency to match the global level through self-motivated management innovation on a continual basis.

KEPCO will stay ahead of others in developing core technologies in the electric power industry through continuous technological innovations, and lead in the global development of electric power technologies.

#### **Environment: Eco-Value Creation**

KEPCO will maximize environmental efficiency by systematically coordinating environment-friendly management practices, and continue to increase energy use efficiency through proactive demand side management.

KEPCO will make efforts for the greening of the entire power supply chain, ranging from generation to transportation and supply.

KEPCO will closely cooperate with other group companies to address climate change issues, thereby contributing to global environmental conservation and creating environmental values for future generations.

#### Society: Building Trust

KEPCO will handle all matters fairly according to moral and ethical values, and release business performances faithfully to enhance management transparency.

KEPCO will pursue co-growth by ensuring mutual benefits for all stakeholders including customers, partners, group companies, the government, society, shareholders and employees.

KEPCO will become a trustful company that fulfills its social responsibility by engaging all employees in the practice of sharing management.

#### **Human Resources: Human-Oriented Management**

KEPCO will continue to raise the quality of life for its employees by pursuing future-oriented labor relations, strengthening activities to ensure health and safety at work, and promoting employee welfare.

KEPCO will strengthen its ability to prepare for the future by establishing the forward-looking and idealistic model for its employees and brining up globally competitive talents.

KEPCO will protect human rights by respecting diversity through efforts such as ensuring gender equality among its employees, supporting the socially disadvantaged, eliminating discrimination, and complying with the principles of prevention of forced labor and child labor.

# KEPCO & Sustainability Management

Green Light for Economic Value

Eco Energy for Environment

KEPCO & Sustainability





### KEPCO and the Electric Power Business

#### ■ KEPCO overview Korea Electric Power Corporation Official name Headquarters 411, Youngdongdaero, Kangnam-gu, Seoul, Korea Founded July 1, 1961 Total assets KRW 66.8 trillion KRW 33.1 trillion Revenues **Employees** 21,118 Electricity sold 385.1 billion kWh Shareholders Korea Development Bank 30.0% The Korean government 21.1% Foreigners 23.8% Others 25.1% Investment 10 subsidiaries (6 GENCOs, 4 group companies) 13 overseas corporations (in 7 countries including China, etc.)

4 equity participations

(NYSE),1994

Korea Exchange (KRX), 1989 New York Stock Exchange

IP0 markets

#### Characteristics of the Electric Power Business

The electric power sector, one of the national backbone industries, is an industry that requires large-scale facilities to do business with fixed assets accounting for 95% of total assets. Given its high dependence on import energy [97%] and the isolated electric power supply network, Korea is vulnerable to disruption in energy supply. Moreover, electric power is consumed immediately after generation, and by nature, electricity cannot be stored for future use. Accordingly, electric power in reserve are required against contingencies and to ensure reliable power supply.

It takes long time and large-scale investment to build electricity facilities and it is impossible to immediately respond to fluctuations in energy demand. Moreover, the transmission/distribution sector is a network business that features characteristics of natural monopoly.

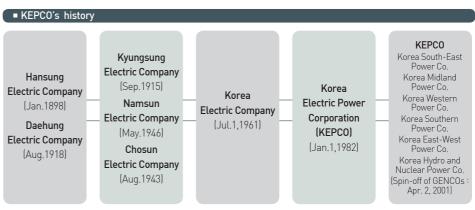
#### **Industry Structure**

The six power generation companies (GENCOs) and independent power producers (IPP) generate electric power and sell it to KEPCO on the Korea Power Exchange (KPX). KEPCO, in turn, sells electric power to general customers through its transmission/distribution network.

#### KEPCO's Role

As a special corporation incorporated under the "Korea Electric Power Corporation Act," KEPCO is classified as a market type public corporation under the Act on the Operation of Public Organizations. Acting as a key locomotive of the development of national economy, KEPCO is striving to improve the reliability of power supply and its global competitiveness. Enhancing the environmental values for future generations, we are also endeavoring to become an internationally respected company built on mutual trust among stakeholders.





#### ■ Electricity business flow chart



## Governance and Organization

#### **Board of Directors**

The Board of Directors, the highest decision-making body at KEPCO, consists of 15 members, including 8 non-standing directors . In a measure to strengthen accountable management of the company and to advance specialization of the BOD, standing directors other than the CEO are appointed by the CEO among the nominees referred by the Nomination Committee who are then approved in the general shareholders' meeting. Non-standing directors are appointed by the Minister of Strategy and Finance with the referral of the Nomination Committee and the resolution of the Steering Committee on Public Enterprises.

The chair of the BOD is assumed by a non-standing director. To ensure BOD's independence, anyone who has special interest in the company is banned from non-standing directorship. The profiles of individual directors and BOD meeting minutes are made public on the KEPCO website (www.kepco.co.kr).

In 2008, BOD met 15 times to address a total of 68 agenda items, up by 3 items from 2007. Attendance by BOD members was 93%. KEPCO will continuously improve the overall conditions and environment necessary to facilitate the operation of the BOD.

#### **CEO Appointment & Evaluation**

The CEO of KEPCO is referred by the Nomination Committee, consisting of non-standing directors and non-government members, approved by the resolution of the general shareholders' meeting, requested by the Minister of Knowledge Economy and finally, appointed by the President. The tenure of the CEO is 3 years. KEPCO has developed fair evaluation criteria for CEO appointment according to the relevant laws and regulations as well as through the deliberation of the BOD. To ensure transparency of the appointment process, KEPCO discloses all steps of the CEO appointment process and the meeting minutes of the Nomination Committee on KEPCO web site (www.kepco.co.kr).

Following consultations with the Nomination Committee, the CEO signs a pact with the Minister of Knowledge Economy with respect to managerial goals or key challenges to be achieved or address during his or her tenure. The progress made on the implementation of the pact is reviewed by the Management Evaluation Board for Public Enterprises.

#### **Audit Committee**

In December 2008, KEPCO established the Audit Committee comprised of 3 auditors who are responsible for independent audit and inspection of its business and accounting practices. Two of them are non-standing directors, and the other one auditor is an accounting or financial expert under the "Enforcement Decree on the Capital Market and Financial Investment Services Act". Prior to the establishment of the Audit Committee, independent audit and inspection of its business and accounting practices were performed by the Audit Council consisting of 3 auditors.

KEPCO will strengthen the monitoring function of the Audit Committee by continuously improving the quality of audit services, which is one of the fundamental checks and balances for sound corporate governance in KEPCO.

#### Organizational Structure

KEPCO has 21departments/offices under 6 divisions at the head office. Nationwide and globally, there are a total of 248 sites of business: under General Business Division are 13 divisions,1 special office,175 branch offices and 38 power transmission branch offices, and under Power Grid Construction Division are 3 transmission & distribution construction head offices, 5 transmission & distribution construction branch offices, 2 overseas offices and 11 special offices including Korea Electric Power Research Institute.

The number of primary offices was reduced to 13 from a total of 26 nationwide, except for the Jeju Island. We expanded and upgraded the sub-business unit system, which was initially applied only to distribution offices, to introduce an integrated sub-business unit system, which supervises overall services at transmission, substation, sales offices, etc. With the integrated sub-business unit system in place, we were able to achieve a phenomenal improvement in customer service quality and lay the groundwork for a truly autonomous and accountable management through introduction of competition for better efficiency among the sub-business units.

Moreover, we are enhancing our ability to respond to changes in future by re-locating personnel through the improvement of corporate –wide work process, and beefing up overseas business and green growth business functions. (Opened Smart Grid Office, Patent Team, Resources Development Team, etc.)

#### Measures taken to improve the function of the BOD in 2008

#### Mode of operation

- •Established the Audit Committee within the BOD [Dec. 2008]
- •Enhanced the role of the BOD and autonomous &accountable management
- ·Revised the operational guidelines for the BOD

#### Management efficiency

- ·Maintained a high level of BOD attendance rate
- •Expanded the coverage of key management issues reported to the BOD
- ·Utilized management advisory service and increasingly incorporated advice in policies

#### Organizational chart

#### CEO

| _ | Executive Vice<br>President      | Controller &<br>Auditor General  |
|---|----------------------------------|--|
|   |                                  | Audit &<br>Inspection Office   |
| _ | Planning & Coordination Division | Management Research<br>Institute   |
| _ | Administration Division          | 5 offices including<br>KEPCO Academy   |
|   | Power<br>Technology Division     | 4 offices including Korea<br>Electric Power Research<br>Institute              |
|   | General<br>Business Division     | 228 offices including business divisions and branch offices                    |
|   | Power Grid Construction Division | 8 offices including<br>Transmission & Distribution<br>Construction Head Office |
| L | Overseas<br>Business Division    | 2 overseas offices   |

248 branch offices under 6 Divisions, 21 Departments/Offices

## KEPCO New Vision

#### 2020 New Vision & Mid-to Long-Term Strategies

Considering changing global trends, KEPCO established 2020 New Vision as part of its effort to develop into a global energy group. With the re-established corporate visions and mid-to long-term strategies in place, we are seeking to become a global utility leader as well as a leader of green growth. Four major mid-to long-term strategies aiming at "Global Top 5 Utility for Green Energy" are first, leading green technology; second, expanding business markets; third, driving global business; and last but not least, advancing innovation and efficiency. To pursuing them effectively, we established 10 action items, and currently we are vigorously implementing the vision under the CEO's managerial motto.

#### 2020 New Vision & Core Value

| Vision                                 | Global Top 5 Utility for Green Energy  |
|--|--|
| ·Global Top 5 Utility<br>·Green Energy | Achieve business performance befitting global top 5 utility  Materialize the Smart Green Utopia as a leader of low carbon green growth |
| Core Value                             | Profit Creation, Change & Innovation, Customer Respect   |
| ·Profit Creation                       | Meet the stakeholders'expectations through efficient resources allocation and creation of high added value                             |
| ·Change & Innovation                   | Improve business performance through proactive response to the environmental changes and constant managerial innovation                |
| ·Customer Respect                      | Create consumer-oriented values with top quality technology and service  |

#### 2020 New Vision Framework



## Business Environment & SWOT Analysis

#### Changes in the Business Environment Surrounding the Electricity Industry

Domestic demand of electric power is projected to grow at an average annual rate of about 1.7% by 2020, and due to the concerted efforts to tackle climate changes at an international level, Korea is increasingly likely to be subject to mandatory emissions reduction in the post-Kyoto regime that begins 2013. Facing the prospect of the greenhouse gas regulations, the electricity industry urgently needs to shift into a low-carbon energy mechanism promptly and further, we need to come up with appropriate measures and plans to respond to the intensifying global competition to secure resources. Meanwhile, stakeholders' demand is increasing that KEPCO, a public corporation, fulfill its corporate social responsibility, and energy welfare focusing on the socially underprivileged is emerging as a key issue.

Against this backdrop, KEPCO established a mid-to long-term roadmap that is helpful to actively respond to these changing environments, seek growth along with stakeholders, and achieve 2020 New Vision.

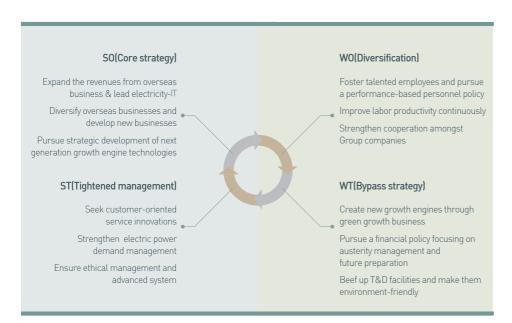
#### ■ SWOT analysis & strategic initiatives



#### ■ Stakeholders' groups



#### Major business environment



| Biz.<br>environ-<br>ment | Overseas | Growing global energy market and intensi-<br>fying competition to secure resources<br>Toughened global environmental regula-<br>tions and emergence of green market    |  |
|--------------------------|----------|--|--|
|                          | Domestic | Slowdown of electric power demand growth in Korea Increasing financial risks such as F/X, crude oil prices, bituminous coal prices, etc.                               |  |
| Government policy        |          | Call on public enterprises to improve their fundamentals and to seek innovation and efficiency  Create jobs by developing new growth engines related to green industry |  |
|                          |          |  |  |

## Pursuing 2020 New Vision: Basic Directions

### ■ R&D strategy 2020

(Long-term

#### Possess the world's top-tier technologies in energy areas

2010 (Mid-term)

Pursue projects essential to a leading global energy group Advance into overseas markets, and make a power technology package

#### Realize the sustainable development of electricity industry



Intensively pursue the development of next generation core technologies Secure and commercialize climate change response technologies as early as possible

#### Take the lead in technology development

Establish strategic R&D investment plans Improve the research system

#### 8 core green technologies

(Unit: KRW 100mil.)

business division

| Green technology                              | R&D period  | Total investment |
|---|-------------|------------------|
| IGCC (Integrated gasification combined cycle) | 2009 ~ 2017 | 15,452           |
| CCS (Carbon capture & storage)                | 2009 ~ 2018 | 13,221           |
| Export-type nuclear reactor                   | 2009 ~ 2015 | 481              |
| Smart Grid                                    | 2009 ~ 2020 | 1,781            |
| Superconductor technology                     | 2009 ~ 2018 | 738              |
| HVDC<br>(High voltage direct current)         | 2009 ~ 2016 | 332              |
| Electric vehicle-charging infrastructure      | 2009 ~ 2015 | 344              |
| Smart green home                              | 2009 ~ 2017 | 185              |
| 8 key projects                                |             | 32,534           |

#### Expanding R&D in New Growth Engine Areas

In an effort to become a global top 5 utility company as declared in 2020 New Vision, we selected 8 core technologies to develop and aim to create future growth engines by increasing investment in R&D in these technology areas.

#### Strengthening Overseas Business as a Growth Strategy

To overcome the limits to growth stemming from slowdown of domestic electricity demand growth, and to create new sources of income, KEPCO is aggressively expanding overseas business. We are diversifying target markets and making inroads into green energy market such as wind power and nuclear power, let alone overseas thermal power business. On top of that, we aim to raise our fuel independent development rate up to 50% by 2020, by proactively pursuing resources development abroad to secure reliable supply of fuels for power generation.

#### **Innovating Management System**

In an attempt to enhance managerial efficiency, KEPCO is seeking a paradigm shift in management approaches by utilizing TDR and lean 6-sigma. We are also improving efficiency in personnel management by conducting job analysis at all sites of business, and making sure that merit and performance-based personnel management will taking root at KEPCO.

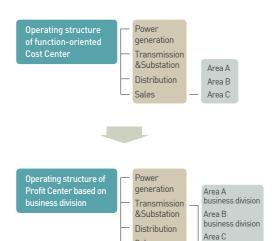
Going forwards, KEPCO will make corporate-wide efforts continuously to enhance managerial efficiency.

#### Labor-Management Relations Built on Trust and Respect

KEPCO will pursue 2020 New Vision through labor-management relations built on mutual trust and respect. Furthermore, we are striving to address challenges facing the company through concerted efforts between labor and management, and to build and increase the common grounds shared by labor and management through field-oriented management.



#### Introduction of integrated business division



#### Operation of Innovation School



#### Open competition job positioning system

Dismissal program for drop-outs Job positioning through open competition in job positioning competition Announce job positioning Innovation Innovation 1st Draft 2nd Draft Dismissal schedules and training re-training receive Re-assign Re-assign

# 2020 New Vision Roadmap and Picture of Smart Grid Utopia

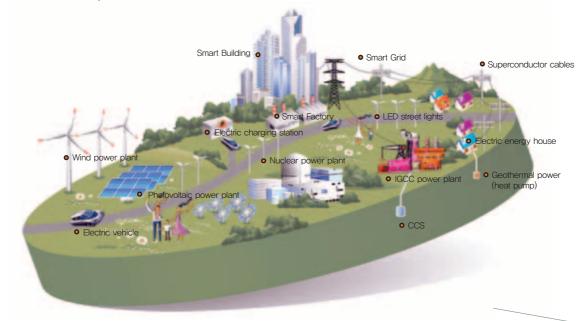
#### ■ Roadmap for 2020 New Vision

| Classification                                | Present('08)                          | <b>Short-term (</b> '09~'10)          | <b>Mid-term (</b> '11~'15)            | <b>Long-term (</b> '16~'20)         |
|---|---------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|
| Global Ranking                                | Top 10                                | Top 9                                 | Top 7                                 | Top 5                               |
| Revenue                                       | USD 28.1 billion<br>(KRW 32 trillion) | USD 35.6 billion<br>(KRW 40 trillion) | USD 52.8 billion<br>(KRW 59 trillion) | USD 76 billion<br>(KRW 85 trillion) |
| ROIC  | Δ3.3%<br>(5 yrs. average 2.6%)        | 3%                                    | 5%                                    | 5% or above                         |
| Revenue from overseas business                | USD 400 million<br>(KRW 0.5 trillion) | USD 800 million<br>(KRW 0.9 trillion) | USD 8.9 billion<br>(KRW 10 trillion)  | USD 25 billion<br>(KRW 27 trillion) |
| The world's top-tier technologies(Cumulative) | -                                     | 3                                     | 17                                    | 25                                  |

#### ■ Mid-to Long-Term Targets for Overseas Business

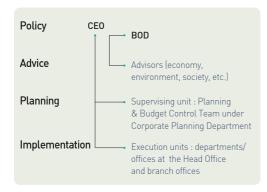
|                                       | 2009<br>As-Is                       | ~2012<br>Laying<br>the groundwork | ~2015<br>Vigorously<br>making inroads into<br>overseas markets | ~2020<br>Expanding<br>our presence<br>in global markets |  |
|---------------------------------------|-------------------------------------|-----------------------------------|--|---|--|
| Revenues<br>from overseas<br>business | KRW 0.5 trillion                    | KRW 2 trillion                    | KRW 9 trillion   | KRW 27 trillion   |  |
| Equity capacity                       | 4,000 MW                            | 9,000MW                           | 17,000 MW  | 32,000MW  |  |
| Secured resources (%)                 | Bituminous coal 12%<br>Uranium 7.5% | 30%                               | 40%  | 50%   |  |

#### ■ Materialization of Smart Grid Utopia



# Sustainability Management: Operational Mechanism

■ Sustainability Management Operating Structure



#### Sustainability Management Framework

KEPCO has set a sustainability management target called "KS-GT5" (KEPCO Sustainability Global Top 5) under the goal of joining the world's top 5 in the energy industry by 2020, and identified and is implementing 12 action items and 43 key performance indicators (KPI) in the four areas of economy, environment, society and human resources. The 12 action items will be mapped to "2020 Mid-to Long-Term Strategic Business Plan," giving momentum to our drive for the vision.

#### Organizational Units for Implementing Sustainability Management

In a measure to implement sustainability management more systematically, in 2005, KEPCO organized a unit dedicated to CSM(Corporate Sustainability Management) and has been operating it since then. Moreover, we appointed three to five CSM experts in each area and are seeking their advice with respect to sustainability management.

Planning & Budget Control Team under Corporate Planning Department, which is in charge of strategic tasks, are also responsible for supervising sustainability management overall, while 21 departments(offices) and 248 branch offices nationwide are executing units. As part of effort to propel the implementation of sustainability management, we organized "KEPCO Development Strategy Forum" comprised of 30 external experts in December 2008 and have since been operating the Forum.

Sustainability Management Overview



#### KEPCO Sustainablity Global Top 5 Vision Core Profit Creation, Change & Innovation, Customer Respect value Enhance sustainability management capabilities 2. Environment: actively respond 1. Economy: secure a competitive edge to environmental risks Expand and diversify businesses Preoccupy and commercialize core Enhance integrated environmental m Make the electric power supply chain Accelerate managerial innovation environmental-friendly Key Respond to the Climate Change Convention Sustainable Action Items Improve managerial transparency Ilmprove the quality of life Strengthen growth partnership Foster global talents Respect human rights and bring diversity Pursue social contribution activities 3. Society: secure social leadership 4. Human: human-oriented management

#### **Development stages**

Under the goal of joining the global top 5 in the energy sector by 2020, KEPCO has set forth the development stages for the four areas of economy, environment, society and human resources and also for the corporate image, and is actively implementing sustainability management to accomplish the goal.

■ Development Stages of Sustainability Management

| Goal              |             | KS-GT 15  | KS-GT 10  | KS-GT 5  |
|-------------------|-------------|---|---|--|
| Development stage |             | Laying the ground work<br>(2005)                          | Growth & development<br>(2006~2010)                             | Sustainability management<br>(2011–2020)                       |
|                   | Economy     | Revenues : KRW 25trillion<br>Net income : KRW 2.4trillion | Revenues : KRW 40trillion<br>ROIC : 3%                          | Revenues : KRW 85trillion<br>ROIC : more than 5%               |
| 4 key areas       | Environment | Partial introduction of environmental management          | Enhance the integrated environmental management system          | Maximize environmental values                                  |
|                   | Society     | Build trust   | Join ten most respected companies in Korea                      | The most respected company in Korea                            |
|                   | Human       | Global talents: 2%  | Global talents: 6%  | Global talents: 10%  |
| Corpora           | ite image   | Joining Global Top 10 Utilities<br>and the Global Compact | Joining Global Top 8 Utilities<br>Placed 10th in sustainability | Joining Global Top 5 Utilities<br>Placed 5th in sustainability |

# Sustainability Management KPIs and Performances

KEPCO has set 43 KPIs(Key Performance Index) in 4 major areas of economy, environment, society and human resources to keep track of our sustainability management performance by linking them with the BSC (Balanced Score Card) system.

|             | Area                            | KPI  |         | Results      |   |                         |
|-------------|---------------------------------|--|---------|--------------|---|-------------------------|
|             |                                 |  | 2007    | 2008         | Up/down   | 2010 Target             |
|             | Business expansion              | Transmission line (C-km)                             | 29,526  | 29,929       | Up (403C-km)                                    | 30,348                  |
|             |                                 | Substation capacity (MVA, cumulative)                | 228,249 | 237,300      | Up (9015MVA)                                    | 247,140                 |
|             |                                 | Distribution line (1000C-km, cumulative)             | 401     | 410          | Up (9000C-km)                                   | 419                     |
|             |                                 | Power sales (100 mil. kWh)                           | 3,686   | 3,851        | Up (16.5bil.kWh)                                | 3,884                   |
|             |                                 | Overseas business( as % of revenues)                 | 0.71    | 1.52         | Up (0.81%p)                                     | 1.79                    |
|             |                                 | CDM business (each)                                  | 4       | 8            | Up (4)  | 9                       |
| Economy     |                                 | PLC service (No. of customer, cumulative)            | 6,500   | 56,500       | Up (50000)                                      | 56,500                  |
| LCOHOIN     | Pursue management               | Labor productivity (MWh/person)                      | 17,913  | 18,358       | Up (445MWh/person)                              | 18,810                  |
|             | innovation                      | Debt-to-equity ratio (%)                             | 49.1    | 63.3         | Up (14.2%p)                                     | 87.1                    |
|             |                                 | Outage/blackout hours (Min./No. of customer)         | 17.19   | 16.08        | Down (1.11min./No. of customer)                 | 16                      |
|             |                                 | Int'l credit rating (Moody's)                        | A1      | A1           |   | A1                      |
|             |                                 | Return on assets (%)                                 | 2.4     | <b>▲</b> 4.5 | Down (6.9%p)                                    | <b>▲</b> 3.9            |
|             | Commercialize core              | R&D investment (%)                                   | 4       | 11.2         | Up (7.2%p)                                      | 8.3                     |
|             | technologies                    | Industrial property rights owned (each, cumulative)  | 1,286   | 1,356        | Up (70)   | 1,250                   |
|             |                                 | Transferred proprietary technologies (case/year)     | 42      | 49           | Up (7)  | 45                      |
|             | Strengthen the integrated       | EMS certification (%)                                | 5.2     | 100          | Up (94.8%)                                      | 100                     |
|             | environmental                   | Energy use (TOE)                                     | 75,418  | 74,991       | Down (427T0E)                                   | 77,618                  |
|             | management system               | Water use (1000 tons)                                | 1,053   | 963          | Down (90 thousand tons)                         | 1,083                   |
|             |                                 | Waste recycling rate (%)                             | 91.2    | 94           | Up (3.8%p)                                      | 85                      |
|             |                                 | Purchase of environment-friendly products (%)        | 65.5    | 50.1         | Down (15.4%p)                                   | 54.1                    |
| Environment | Environment-friendly            | Urban transmission line undergrounding ratio (%)     | 97.4    | 97.7         | Up (0.3%p)                                      | 98                      |
|             | power supply chain ´            | Distribution line undergrounding ratio(%)            | 12.7    | 13.3         | Up (0.5%p)                                      | 13.8                    |
|             |                                 | T/D loss rate (%)                                    | 3.99    | 4.01         | Up (0.02%p)                                     | 4.0                     |
|             |                                 | Load factor(%)                                       | 73.9    | 76.6         | Up (2.7%p)                                      | 75.4                    |
|             |                                 | Peak reduction by DSM(MW)                            | 4,222   | 4,345        | Up (123MW)                                      | 2,249                   |
|             | Respond to the Climate          | Renewable energy generation (%)                      | 0.37    | 0.36         | Down (0.01%p)                                   | 0.5                     |
|             | Change Convention               | Greenhouse gas emissions(CO2-1000tons)               | 2,387   | 2,195        | Down (192thousand tons                          | 2,594                   |
|             | Improve managerial transparency | KICAC-rated integrity as a public enterprise (point) | 9.56    | 9.52         | Down (0.04point)<br>(Evaluation system changed) | 9.0 or above<br>(KICAC) |
|             |                                 | E-procurement rate (%)                               | 98.7    | 98.8         | Up (0.1%p)                                      | 95                      |
|             |                                 | Information disclosure rate (%)                      | 93      | 93.3         | Up (0.3%p)                                      | 92.9                    |
|             |                                 | BOD attendance rate (%)                              | 94.9    | 93           | Down (1.9%p)                                    | 95                      |
|             | Strengthen partnership          | Customer satisfaction as public enterprise (point)   | 91.5    | 90.8         | Down (0.7 point)                                | Top grade               |
| Society     | amongst shareholders            | SME support (KRW 100 mil.)                           | 230     | 202          | Down (KRW 2.8 bil.)                             | 240                     |
|             |                                 | Purchase from SMEs (%)                               | 75      | 76           | Up (1%p)  | 65.3                    |
|             |                                 | Supplier satisfaction (point)                        | 88.3    | 93.3         | Up (5 points)                                   | 88                      |
|             |                                 | Creation of new jobs (person)                        | 600     | 362          | Down (238 persons)                              | 108                     |
|             | Social                          | Social contribution (KRW 100 mil.)                   | 1,037   | 1,214        | Up (KRW 17.7 bil.)                              | Ordinary income 6%      |
|             | contribution activities         | Volunteering hours (per person)                      | 9.8     | 10.5         | Up (0.7 hour)                                   | 15                      |
|             | Improve the quality of life     | On-the-job injury rate (%)                           | 0.014   | 0.005        | Down (0.009%p)                                  | 0.016                   |
|             | , ,                             | Welfare satisfaction (point)                         | 71.4    | 72.2         | Up (0.8 point)                                  | 7.26                    |
|             |                                 | Job-quit rate (%)                                    | 1.7     | 0.7          | Down (1%p)                                      | 1.5                     |
| Human       | Foster global talents           | Education/training expense(%)                        | 0.2     | 0.16         | Down (0.04%P)                                   | 0.2                     |
| Hullian     |                                 | Education/training hours (per person)                | 87.7    | 92.8         | Up (5.8 hours)                                  | 90                      |
|             | Respect human rights            | Female employees (%)                                 | 20.7    | 25           | Up (4.3%p)                                      | 20                      |
|             | , , ,                           | Disabled employees (%)                               | 2.3     | 2.3          | -   | 2                       |

<sup>•</sup> R&D investment rate: increased as a rise in costs of purchased electricity caused a sharp fall in net sales.

<sup>•</sup> Contributions to industrial property rights: some IRPs may be subject to abolishment following regular deliberation on appropriateness of holding them considering administrative costs, etc.

# Sustainability Management Awards & Recognition

| Area              | Awards & Recognition   | Awarder   | Month                  |
|-------------------|--|---|------------------------|
|                   |  |   |                        |
|                   | Garnered the top level in 2007 government evaluation of innovation practices in public enterprises for 3 consecutive years | Ministry of<br>Strategy and Finance                           | Арг. 2008              |
|                   | Won 2008 New Quality CSR Grand Prix  | New Quality Forum (NQF)                                       | May. 2008              |
| Economy           | 2007 Global Top Utility – placed 13th  | Platts  | Oct. 2008              |
| Leonomy           | Ranked 195th among Forbes global 2000 companies (9th in utility area)  | Forbes  | Apr. 2008              |
|                   | Ranked first in 2008 Management Performance Evaluation conducted by the Government for 2 consecutive year                  | Ministry of<br>Strategy and Finance                           | Jun. 2009              |
|                   | Ranked 305th among 2008 Fortune's global 500 companies (10th in utility area)  | Fortune   | Jul. 2009              |
|                   | 2007 Best COP of sustainability report   | UN Global Compact   | Jan. 2008              |
|                   | 2008 Korea Ethical Management Grand Prix   | The Korea Times   | Feb. 2008              |
|                   | The Presidential Award for the best organization in SME promotion  | Ministry of Public<br>Administration and Security             | May. 2008              |
|                   | Selected as the best organization in anti-corruption practice evaluation for 3 consecutive years                           | Anti-Corruption & Civil Rights Commission                     | Dec. 2008              |
| Society           | Ranked top among a total of 381 organizations in the survey on the integrity of public enterprise                          | Anti-Corruption & Civil Rights Commission                     | Dec. 2008<br>May. 2009 |
|                   | 2008 Presidential Award for best public purchase organization  | Small & Medium Business<br>Administration                     | ,                      |
|                   | Acquired the top grade in the survey on customer satisfaction of public enterprises for 10 consecutive years)              | Ministry of<br>Strategy and Finance                           | Apr. 2009              |
|                   | 2009 Best Corporate Governance Award   | Korea Exchange (KRX)  | Jun. 2009              |
|                   | 2008 Best COP of sustainability report   | UN Global Compact   | Jul. 2009              |
|                   | 2008 Eco-Friendly Management Awards  | Korea Economic Daily  | Jun. 2008              |
|                   | Acquired KEPCO's greenhouse gas inventory verification statement   | Korea Energy Management Corp. (KEMCO)                         | Oct. 2008              |
| Environment       | Acquired IS014001EMS certificate (corporate wide)  | Korea Eco-Products Institute (KOECO)                          | Oct. 2008              |
| L.IVII OIIIIIEIIL | Acquired an EDP certificate  | Korea Eco-Products Institute (KOECO)                          | Dec. 2008              |
|                   | Acquired a carbon footprint labeling certificate   | Korea Environmental Industry<br>&Technology Institute (KEITI) | Jul. 2009              |

# Participation in Key Sustainability Management Initiatives

| Agreement   | Signed in |
|---|-----------|
| Transparent Society Pact between KICAC and the CEOs of 18 public enterprises  | Jun. 2005 |
| Renewable Portfolio Agreement with the Ministry of Commerce, Industry and Energy  | Jul. 2005 |
| Agreement to comply with the 10 Principles of UN Global Compact   | Aug. 2005 |
| Transparent Society Pact in the Electric Power Sector among 11 KEPCO group companies and the representative of major electric power companies   | Sep. 2005 |
| Integrity Pact between KEPCO and business partners (1,579 companies / 18,135 persons participated)  | Jan. 2006 |
| 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) | Jun. 2007 |
| Renewable Portfolio Agreement II with the Ministry of Knowledge Economy   | Jul. 2009 |



# Green Light for Economic Value





### **Business Areas**

#### Facilities and sales volume

| Major facilities   |                    |                     |  |  |  |  |
|--------------------|--------------------|---------------------|--|--|--|--|
| Transmission lines | Distribution lines | Substation capacity |  |  |  |  |
| 29,929c-km         | 410,015c-km        | 237,300MVA          |  |  |  |  |

| Sales volume<br>385.1 bil. kWh                | Industrial<br>purpose<br>52.8% |              | General<br>purpose<br>22.5% | Household Other purpose 15.0% 9.7% |          |
|---|--------------------------------|--------------|-----------------------------|------------------------------------|----------|
| Power<br>generation<br>facilities<br>72,491MW |                                |              |                             |                                    |          |
|   | Coal<br>32.7%                  | Gas<br>24.8% | Nuclea<br>24.4%             | rpower Oth<br>18.                  | er<br>1% |

#### Comparison of electricity tariffs

| Classification                            | Korea              | Japan           | USA            | France          | UK              |
|---|--------------------|-----------------|----------------|-----------------|-----------------|
| Tariff<br>(% against<br>Korea 's in 2007) | <b>77.85</b> (100) | 132.50<br>(170) | 85.75<br>(110) | 115.47<br>(148) | 139.25<br>(179) |
| Baseline year                             | '07                | '07             | '07            | '06             | '07             |

\* The exchange rates as of Dec. 31, 2007 were applied; Korea(100) is the baseline for comparison.

#### **Domestic Electric Power Business**

In 2008, the peak demand for electric power in Korea stood at 62.79 million Kw, a 0.82% increase from 2007 due to the global economic recession. The capacity of power generation facilities increased by 6.18% year on year to stand at 72,491MW thanks to the operation of Youngheung Power Plant Unit 4 and Hadong Power Plant Unit 7. We achieved reliable supply of electric power through timely expansion and efficient operation of electric power supply facilities, and by maintaining an appropriate electricity reserve rate even during the highest peak hours.

Moreover, KEPCO implemented a comprehensive plan to prevent electricity outages during summer time. We also established a real-time monitoring system applying IT systems to ensure the smooth operation of electric power facilities and operated power quality management (PQM) systems at each stage of power supply. As a result, KEPCO maintains the world's top level in electric power quality, with the average power outage time per household standing at 16.08 minutes and the voltage regulation compliance ratio at 99.9%

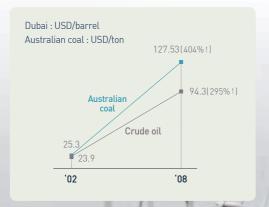
Meanwhile, to make the value chain of electric power supply environment-friendly, we have replaced 97.7% of transmission/distribution lines in urban areas with underground lines and reduced power loss during transmission/distribution to 4.01%, one of the world's lowest levels.

Due to the international fuel price hike and soaring foreign exchange rates in 2008, however, the costs of electric power purchase from GENCOs rose to KRW 71.91/kWh, about 22.4% up from KRW 58.73/kWh in 2007, causing revenues to plummet. As a consequence, in 2008, KEPCO suffered a current net loss of KRW 2.9 trillion. In a measure to ensure normalization of the electricity business against soaring fuel prices and stabilize electricity tariffs for ordinary households, the government provided KRW 667.8 billion in a subsidy to KEPCO.

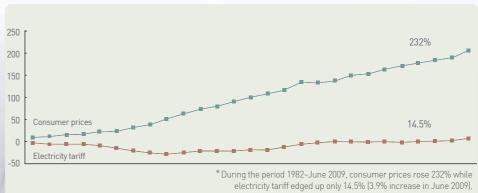
In 2009, however, KEPCO is expected to get back on track through various efforts, that is, encouraging reasonable electric power consumption, absorbing about 4% of the causes of tariff increase internally through cost reduction, and improving the efficiency of he electric power purchase scheme.

KEPCO will make continuous efforts to carry out its mission of ensuring reliable supply of quality electric power, through timely expansion of electric power facilities and advancement of operational technologies.

#### Crude oil and bituminous coal prices



#### Electricity tariff trends



#### Customer Services and Electricity Pricing Policy

In 2008, KEPCO's electric power sales recorded 385.6 billion kWh, up 4.5% from 2007. It is projected that the growth rate of electric power sales, which currently stands at about 4%, will plummet to 1% level after 2017, and a growing number of CESs and small-scale CHP generators will enter the market, making the electric power market ever more competitive.

Meanwhile, KEPCO is endeavoring to prevent and reduce energy waste at the national level, by adjusting electricity tariff, which currently falls short of production cost, to a more sensible level and encouraging reasonable use of electric power among general consumers.

Furthermore, we are making various efforts to improve the quality of our service provided to general consumers in terms of electricity use and to revise the current customer contract in a way that improves convenience of customers. Also, we are continuously improving our service quality by operating various channels through which stakeholders can participate in the policy making process, such as collecting customers' ideas on service improvement.

In particular, in 2008, we enhanced the service quality evaluation system by introducing internally-devised CSI(Customer Satisfaction Index) and telephone monitoring. Moreover, we are currently providing exclusive services for special customers such as foreign language telephone service and issuance of Braille bills for visually disabled customers, and introduced a unified billing system for the conveniences of large-volume customers. (See Customer Satisfaction on p.46)

These multifaceted efforts led to a desirable result that KEPCO ranked first in the annual surveys of customer satisfaction for public enterprises conducted by the Ministry of Strategy and Finance for 10 consecutive years.

We will continuously improve our service competitiveness by strengthening CRM (Customer Relationship Management) activities to provide customized services that can meet the needs of each customer segment. In addition, we will reduce the number of segments subject to progressive tariffs applied to household customers, and secure an appropriate level of profit by imposing sensible electric tariffs through the introduction of a pricing system that electricity tariffs are linked to prices of power generation fuels. At the same time, we will ease gaps in electric tariffs that vary depending on contract type.

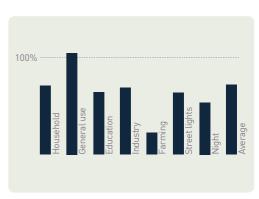
#### ■ Load factor targets



#### ■ Cost recovery rate improvement targets



#### Appropriate cost recovery rate as of 2008



■ Customer service improvement plan



Make electric power

supply service efficient

Upgrading/advancing the quality of electric power supply service

2010 (Mid-term)

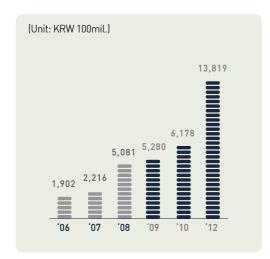
Establish IT-based work system Raise electric tariffs for the purpose of DSM Reserve linkage system Shift to efficiency equipment market (50%) World best electric power supply service

2020 (Long-term)

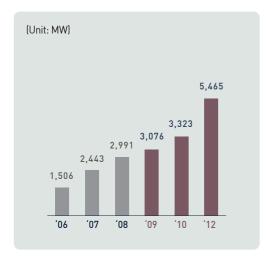
Ensure that the best quality service will become the norm Cost-based pricing system Interactive demand management Commercialize CDM for efficiency improvement

Improve and make the current system

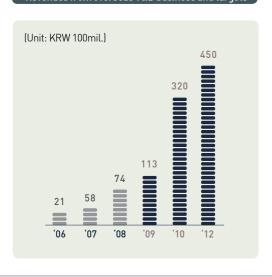
#### Revenues from overseas business



#### Capacity of overseas power plant equity



#### ■ Revenues from overseas T&D business and targets



#### Overseas Business

To overcome growth constraints stemming from slowdowns of growth in domestic electricity demand and increasing inroads of private enterprises into the domestic electricity market, we are exerting efforts to expand business opportunities in overseas markets in line with the global trends of deregulations and market opening in electricity business.

In 2008, according to our strategy of diversifying overseas target markets, we acquired the equity of power generation facilities in 39 countries and thereby secured 2,991MW of power generation capacity. Furthermore, we are seeking diverse overseas business areas, shifting our focus from thermal power to nuclear power, hydro, transmission & distribution, communications areas. Through overseas expansion, we aim to significantly increase revenues from overseas businesses up to KRW 27 trillion, which is equivalent to 32% of total revenues by 2020.

To achieve the target, we will actively pursue package deals that link electric power generation and resources development, secure regional strategic hubs across the world, and commercialize green energy such as nuclear power, hydro, and new & renewable energy, and new future technologies (smart grid, infrastructures for charging electric vehicles, etc.)

Overseas project statistics (No. of project, as of June 2009)

| In operation  |                   |                                  | (         | Ongoin        | g Under negotiation           |           |                   |                  |                   |   |                               |           |       |
|---------------|-------------------|----------------------------------|-----------|---------------|-------------------------------|-----------|-------------------|------------------|-------------------|---|-------------------------------|-----------|-------|
| Thermal power | Distribu-<br>tion | Trans-<br>mission/<br>substation | sub-totat | Thermal power | Resources<br>develop-<br>ment | sub-total | Hydro-<br>thermal | Nuclear<br>power | Distribu-<br>tion |   | Resources<br>develop-<br>ment | sub-total | Total |
| 8             | 5                 | 10                               | 23        | 4             | 5                             | 9         | 25                | 11               | 4                 | 4 | 11                            | 55        | 87    |

Overseas project contracts signed in 2008 (Unit : MW)

| Classification                             | Facility capacity | Equity capacity |
|--|-------------------|-----------------|
| Rabigh, Saudi Arabia (Power plant project) | 1,200             | 480             |
| Al Qatrana, Jordan (Power plant project)   | 373               | 242             |
| Neimenggu, China (3rd wind farm project)   | 278.5             | 112             |
| Gansu, China (2nd wind farm project)       | 49.5              | 20              |
| Total                                      | 1,901             | 854             |

#### Thermal Power Generation

In 2008, for the first time since the Ilijan power plant project in the Philippines, KEPCO was selected as the successful bidder in the international competitive bidding for the Rabigh power plant project in Saudi Arabia. This is a meaningful accomplishment as it allows KEPCO to secure a gateway into the Middle East, the world's largest market for private sector power generation business.

Furthermore, we signed a contract of a 373MW CCPP project in Jordan and won wind farm projects in Gansu and Neimenggu of China, which are opportunities to prove KEPCO's green technology power. Through the wind farm projects in China, we can commercialize 1MT carbon credits and make a huge progress in our efforts to materialize low carbon green growth. Backed by these overseas projects, revenues from overseas businesses in 2008 stood at KRW 508.1 billion, a remarkable 129% up from the previous year.

#### Transmission & Distribution

Boasting the world's top-tier performances in power loss during transmission/distribution and load factors, KEPCO waged aggressive marketing campaigns in African and Asia and generated USD11.17 million in revenues from 18 projects in service and training business. On top of that, we are currently developing three transmission/distribution projects including T&D facility construction project under EPC (Engineering, Procurement, and Construction) contract in Sudan, etc. As for the African market, we are shifting our focus from the existing T&D consulting business in the northern African region towards the electricity market and aim to enter and expand it mainly through EPC projects.

#### Nuclear and Hydro Power Generation

Currently, KEPCO is taking a keen interest in making inroads into overseas nuclear power plant markets, which has been brought back in the limelight due to the global discourse on greenhouse gas emissions reduction.

KEPCO has 30 years of experiences in commercial operation of nuclear power plants. We also have developed OPR1000, a Korean-standard reactor, and APR1400, a 3rd generation reactor, which are considerably more reliable and economical than the existing nuclear power plants. Built on these achievements, we are now exerting all-out efforts to find nuclear power plant markets abroad. Currently, we are conducting aggressive solicitation campaigns to realize the first ever export of nuclear power plant, by employing approaches tailored to 10 major countries that we selected as potential customers, including UAE, Turkey, Jordan, China, etc.

Meanwhile, we are planning to expand our hydro power generation business, intensively in South America and Asia, regions with abundant water resources and numerous development projects and later we will further tap into markets in other developing countries. For example, in November 2008 KEPCO carried out CDM project modeling for a hydro power generation project in Nepal. This hydro power plant, once it begins operation, will earn us 25,000 tons of carbon emission rights per year. Currently we are also developing 8 projects in Nepal, Honduras, Georgia, etc.

#### Pyeong-hwa Substation in Gaesung



#### Resources Development Business

KEPCO is aggressively searching for overseas resources development projects as well in an attempt to secure reliable fuel sources. In January 2008, KEPCO and 4 GENCOs jointly made equity investments in the Moolaben mine in Australia, acquiring 5% of shares and securing an annualized 2.5 million tons of bituminous coal, and also secured the right to uranium exploration and development in Waterberry, Canada. The Moolaben investment is the first mine equity acquisition since the acquisition of the Waiong mine in Australia 14 years ago. Through this acquisition we secured additional bituminous coal and thereby raised our independent development level of generation fuels up to 7%. We will mainly pursue package projects that link power generation with resource development abroad.

#### Supplying Electric Power to Gaesung Industrial Complex

The Gaesung Industrial Complex is an inter-Korea economic cooperative project that is based on combination of production inputs with comparative advantages of each Korea. KEPCO has supplied electric power to the Gaesung Industrial Complex since March 2005 and it completed the construction of a 154kV-grade "Pyeonghwa" substation that was designed to accommodate the increasing load in the Gaesung Industrial Complex, thereby contributing to the stable development of the Complex. It appears that if the Gaesung Industrial Complex brings a certain level of desired results, similar kinds of inter-Korea economic cooperation projects will be pursued further. Against this backdrop, based on its experiences as an electric power supplier of the Gaesung Industrial Complex, KEPCO will faithfully perform its role of a leading participant in inter-Korean collaborative projects.

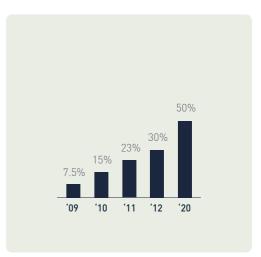
#### MOU signing ceremony between KEPCO and the government of Ecuador



#### Bituminous coal independent development targets



#### Uranium independent development targets



#### ■ KEPCO's overseas projects

- Power generation project
- Transmission/distribution project
- Resources development project Gansu wind farm(99MW)
  Neimenggu wind farm(647MW)
  Shanxi P/P linking with a
  coal mine(4,882MW) North Korea Gaeseong Industrial Complex Kazakhstan Balkhash P/F (1,320MW) Banglades Philippines Malaya P/P(650MW) Ilijan C/C(1,200MW) Jordan 0 Naga T/P(205.6MW) Cebu T/P(200MW) Saudi Arabia Ghana WAPP • • n(1,204MW) Repaired boilers at Nigeria Egbin Power Plant and

#### MOU Signing Ceremony between KEPCO and the Jordan Atomic Energy Commission

acquired the equity of the plant



### Appointed as the successful bidder in Int'l competitive biddings consecutively

- -Al Qatrana, Jordan (373MW)
- -Rabigh, Saudi Arabia(1,200MW)

#### Materialize Green KEPCO

- <sup>\*</sup> 2nd wind farm project in Gansu and 3rd wind farm project in Neimenggu, China (328MW)
- •Commercialize 1MT carbon emissions rights
- \*Aggressively pursue new nuclear power, hydro power projects

#### Promote T&D and resources development projects

- \*The value of T&D project contract: USD11.17million
- \*Secured 2.5million tons of bituminous coals per year additionally
- Secured the right to explore and develop an uranium mine

#### Consolidating KEPCO's Capabilities to Carry Out Overseas Business

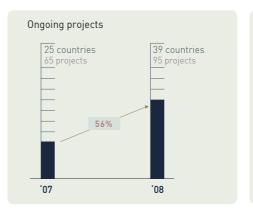
KEPCO is stepping up efforts to consolidate its internal capabilities to tap into global market. As part of such efforts, we amended the Korea Electric Power Corporation Act to incorporate overseas business into the scope of KEPCO's target undertaking and currently are operating a more expanded human resources pool that consists of specialists equipped with sufficient knowledge and field experiences in various overseas business areas. On top of that, to enhance the specialized competence of employees in overseas business, we are running customized OJT and apprenticeship programs. For smoother operation of oversea projects, we are promptly dispatching employees assigned to a target project immediately after confirming the conclusion of project deals and also running programs that help dispatched employees to quickly adapt themselves to a new environment in order to encourage them to settle down there.

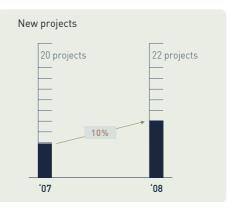
stralia, Bituminous coal

levelopment

Besides these programs designed to foster talented employees, we are consolidating our capabilities to win new overseas projects through continued efforts to make sure that the Reward Planning System that directly links performance to compensation will take root and to expand the operation of overseas strategic hubs.

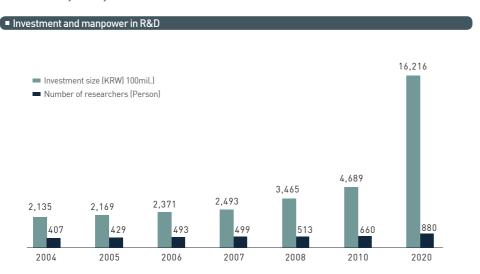
#### Year-on-year comparison of overseas project performance





# Taking the Lead in Developing Green Technologies

Seeking to create new growth engines for the future through technology development, KEPCO is operating KEPCO technology roadmap (K-TRM) that incorporates business strategies and will expand R&D investment, which stands at KRW 346.5 billion as of 2008, up to KRW 1.6216 trillion by 2020. In 2008, the number of patent application rose 20% and the number of SCI (Science Citation Index)-enlisted papers increased 31% year on year.



To develop future core technologies and lay the groundwork for new business, we have been exerting allout effort to successfully carryout target-oriented R&D projects that have a great potential to contribute to the company's business performance. As a result, we made remarkable accomplishments in 2008. For instance, KEPCO became the world's first company that has developed a technology for NPP steam generator tube displacement and damage assessment, which combined with other technological accomplishments such as a low-noise transformer and a quick PCB analysis method, generated KRW 84.4 billion in revenues and substituted import technologies.

Meanwhile, we are expanding new & renewable energy development in an effort to lay the foundation for green growth. KEPCO's green growth strategies are classified into expanding new & renewable energy facilities, developing large-volume new & renewable power sources, commercializing green energy, and laying the groundwork for promotion and dissemination of new & renewable energy. Currently, a total of 22 R&D projects including fuel cell, photovoltaic power, IGCC, etc are underway.

These efforts earned us ISO14001 in October 2008 and EDP(Environmental Declaration of Products) certification in the following December.

To improve the utilization and economic aspects of R&D and to secure technological initiatives in new businesses, KEPCO established Patent Team, which is committed to creating added values utilizing KEPCO group companies' proprietary technologies as well as synergy effect of technology development. Further, we are carrying out about 180 collaborative R&D projects amongst industry-academia-research institutes to enhance collaboration and efficiency of technology development.

To achieve 2020 New Vision, KEPCO drew up a total of 8 strategic projects for green technology development considering appropriateness and technological merits. More specifically, they are categorized into IGCC, CCS, export-oriented power plant, smart grid, HVDC, superconductor technology, infrastructure for charging electric vehicles, smart green home system. KEPCO is endeavoring to secure new growth engines through development of core technologies, and improve its profit model by tapping into related industries over the long term. We will be always at the forefront of international efforts to preserve the environment through emissions reduction.



(Unit : No. of case)

■ <u>Joint R&D</u> projects





03 Eco Energy for Environment KEPCO Sustainability Report

**Q4** Synergetic Society
KEPCO Sustainability Report

## Smart Grid Project

KEPCO is committed to tackling the environmental issues such as greenhouse gas emissions reduction and energy overuse, and at the same time, we are intensively pursuing the smart grid project in an attempt to improve energy efficiency and expand the use of new & renewable energy.

Smart grid is a next generation electricity network using information technology that interlinks all elements of the electric power grid from production to consumption and maintains them in an optimal condition, thereby enhancing the efficiency of facility operation.

In July 2009, Korea was named to be the leading country in pursuing the smart grid project and KEPCO embarked on construction of a test bed for the development and commercialization of related technologies. KEPCO will invest KRW 178.1 billion in smart grid project by 2020, and on the basis of the smart grid roadmap slated to be established by December 2009 and research outcome from the test bed, we will create next generation growth engines.

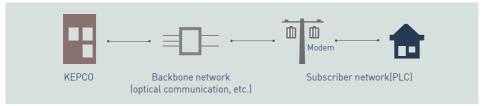
#### ■ Roadmap for Smart Grid Project



### PLC and CDM Business

KEPCO aims to make inroads into electricity-related industries that can increase efficiency and benefits at the national level by efficiently utilizing its internal resources, while not infringing on the areas already led by the private sector.

First of all, in the preparation for PLC (Power Line Communication) service, we pursued and completed a pilot project of low –voltage remote monitoring system on 6,500 households by 2007, and further expanded the scope into 50,000 households in Pangyo and new town areas in 2008. Currently, KEPCO is developing various auxiliary businesses through PLC.



Meanwhile, we have continued to expand new & renewable energy facilities to lay the groundwork for green growth. In order to turn the challenges posed by climate change into opportunities, KEPCO is pushing ahead with CDM (Clean Development Mechanism) projects in alignment with other overseas projects. As a result, we registered 9 projects, including wind power generation projects in Neimenggu and Gansu of China, secured an annualized 420,000 ton carbon credits and generated USD 4.7 million in revenues. Moreover, we are seeking CMS business using SF6 gas re-collection and recycling technologies, and through this business, we are expected to reduce 2.63 million tons of greenhouse gas emissions per year and sell the carbon credits, generating about KRW 300 billion over 10 years to come. As part of such effort, we acquired a greenhouse gas inventory verification and certification statement issued by CDM Certification Office in October 2008, officially recognized for our environmental performances and efforts to respond to climate change.

By discovering sources of new and renewable energy, KEPCO is not only reducing CO<sub>2</sub> emissions but also searching for new business opportunities. In the period from 2006 through 2008, KEPCO and the six GENCOs invested a total of KRW 520.1 billion in developing and promoting new and renewable energy, with a plan to invest KRW 2.3983 trillion further from 2009 through 2011. Furthermore, we will concentrate our capabilities on developing technologies in emerging areas with commerciality such as fuel cells, wind power, coal gasification, photovoltaic energy and bioenergy.

#### The world's first SF6 CDM business

- SF<sub>6</sub> gas processing technology in T&D areas When checking, discarding→recover SF<sub>6</sub> for recycling
- Secured CDM UN registered carbon credits Make SF<sub>6</sub> CDM business a new growth engine of green energy industry

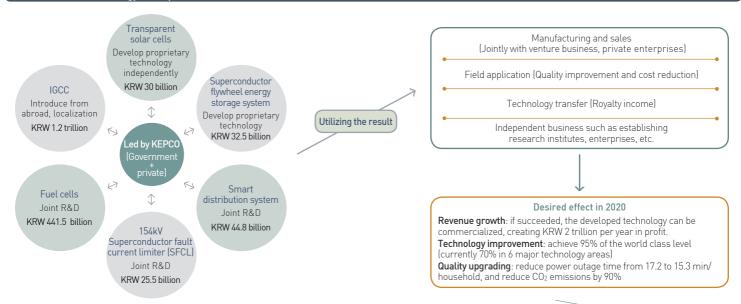
#### \_ay the groundwork for green growth

- Expand new & renewable energy facilities 575MW→643MW (12% up)
- 22 projects including IGCC, wind power KRW 128.4 billion in R&D budgets

#### ■ Mid-to long-term new & renewable energy R&D projects

| Fuel cell                                   | Develop 100kW distributed SOFC system (2014)   |  |  |  |  |
|---|--|--|--|--|--|
| Photovoltaic<br>energy                      | Develop MW-class centrally receiving photovoltaic power generation system [2009]                         |  |  |  |  |
| Hydrogen<br>energy                          | Develop high temperature electrolysis<br>hydrogen production technology based on<br>nuclear power (2011) |  |  |  |  |
| Coal<br>gasification<br>power<br>generation | Develop the design and operational technologies for 300MW-class test bed (2014)                          |  |  |  |  |

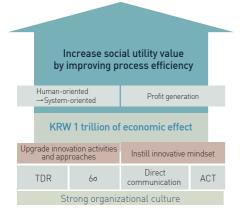
#### Desired effect of technology development



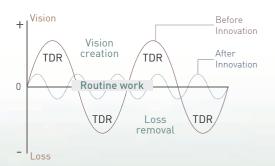
# Improvement of Performance through Innovation

Managerial innovation mechanism

#### Global Top 5 Utility for Green Energy



#### ■ Visualization of TDR



#### Cost Reduction and Process Improvement

In 2008, the financial structure of KEPCO deteriorated due to slowdown of growth attributed to global financial crisis, high foreign exchanges rates, and soaring power generation fuel prices. In an attempt to overcome these challenges facing the company, we established a system for constant managerial innovation and conducted corporate-wide innovation campaigns. As a result, we significantly improved our managerial efficiency, with competition amongst employees and entrepreneurial corporate culture being actually introduced to KEPCO.

These innovation activities were carried out through innovation approaches such as TDR(Tear Down & Redesign) and  $6\sigma$ , and other various attempts such as CEO-led managerial innovation workshop, field tour, and mind innovation training. Our innovation activities became the benchmarks for other organizations and contributed to forming an innovation-oriented corporate image as appreciated in press reports. On top of that, in the Review of Innovation in Public Enterprises conducted by the Ministry of Strategy and Finance in April 2008, KEPCO garnered the highest grade for the third consecutive year.

Last year, "TRD project for 154kV compact substation model development" brought a cost saving effect amounting to KRW 76.3 billion, by minimizing substation construction costs using new technologies such as cooling method. Meanwhile, a TDR project for replacement of outdated transformers for distribution system and maintenance standard improvement resulted in saving an annual average of KRW 24.1 billion by reducing the costs incurred from replacing transformers and waste oil.

At present, with 60 TDR projects finished, about 280 employees are carrying out a total of 61projects. KEPCO will further expand the ongoing innovation activities and develop them as KEPCO-specific innovation models.

#### Innovating Financial System

In an effort to maintain sound financial fundamentals in rapidly changing business environment and prepare itself for possible deteriorating management conditions, KEPCO is operating the Contingency Plan and the Moving Plan, which is a liquidity control program and is vigorously pursuing sustainable growth. Furthermore, to ensure that the ERM (Enterprise Risk Management) system which has been in place since 2006 is widely utilized and to encourage sub-business units to improve their performances and create values, we are currently operating the EVA system and the Activity Based Cost system for cost management innovation. In 2008, in the preparation for fuel price hikes, we also came up with contingency strategies and financial plans based on various possible scenarios, thereby strengthening the liquidity risk management system. We also enhanced our ability to cope with F/X risks by utilizing EaR.

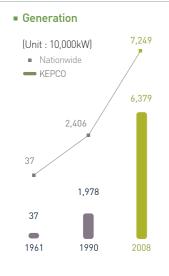
## Improving the Performance of Integrated Sub-Business Units by Introducing Competition

In September 2006, KEPCO began operating a sub- business unit system to enhance managerial efficiency in the distribution sector. With learning effects accumulated from this process, that is, changes in employees' mind and improved accountable management, we introduced a more evolved system – integrated sub-business unit operation that encompasses all elements in power supply value chain from T&D to sales.

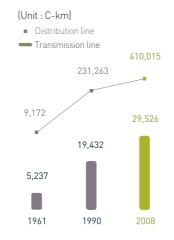
These changes led to a phenomenal improvement in our customer service quality, and laid the groundwork for creating an environment that accountable management by individual business unit and internal competition amongst profit centers can take root at KEPCO. We will endeavor further to create corporate values and enhance internal management efficiency by striking a balance between collaboration and competition amongst business units.

## Key Economic Performance in 2008

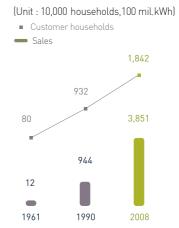
#### Business size



#### ■ Transmission/distribution



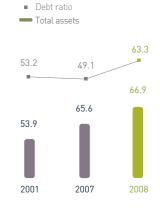
#### ■ Customer households & electric power sales



## Key Financial Performance

#### Total assets : Global ranking 222 ('09 Forbes)

(Unit: %, KRW tril.)



#### Revenue : Global ranking 238 ('09 Forbes)

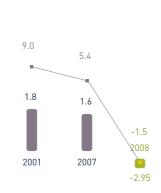


#### Net profit : Global ranking 357 ('09 Forbes)

(Unit: %, KRW tril.)

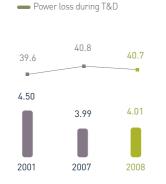
Net profit to total assets

Current net profit/loss



#### Managerial Efficiency

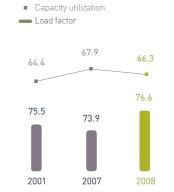
#### Power loss during T&D : Global Top Tier



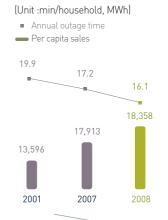
■ Heat efficiency of thermal power plants

#### ■ Load factor : Global Top Tier

(Unit:%)



#### • Outage time : Global standard





Green Light for Economic Value

Synergetic Society

KEPCO & Sustainability

**Eco Energy for Environment** 





## Environment Management Guideline

KEPCO, as a company that produces and supplies electronic power, the engine of national competitiveness, sets and observes the environmental policy as below in order to fulfill our social responsibilities through environment-friendly management, increase KEPCO's environmental management capabilities to the level of "global top 5 in the energy utility sector by 2020," and thereby achieve our vision "Global Top 5 Utility for Green Energy"

#### Enhance eco-efficiency by implementing environment-friendly management

- 1. Accomplish environmental management objectives by complying with environment-related laws and regulations and implementing, operating and continuing to enhance the environmental management system that meets the global standards.
- 2. Conduct training necessary for our employees to take the initiative in implementing environmental management activities and strengthen stakeholder communication.
- 3. Promote the reuse of materials and the use of environment-friendly products to reduce environmental burden at source and contribute to bringing about an eco-efficient society in which resources are recycled.

## Make best efforts for the greening of the entire power supply chain ranging from production, transportation, sale and consumption of electric power

- 1. Strengthen environment-friendly management of the power supply chain and cooperation under the goal of advancing sustainability of our society through environment-friendly production and supply of electric power.
- 2. Construct and operate environment-friendly facilities and minimize the power loss through efficient operation and management.
- 3. Conduct various activities for demand-side management, such as load control and energy efficiency improvement programs, to enhance efficiency of demand –side management and the efficiency of energy use of the nation.

#### Understand the seriousness of climate change, the global environmental challenge, and actively cope with it

- 1. Provide leadership for the group-level joint response to climate change issues, the global environmental challenge.
- 2. Continue to reduce greenhouse gas emissions by developing and promoting environment-friendly energy, conserving energy use and improving facilities.
- 3. Actively support the activities to reduce indirect greenhouse gas emissions from power use through systematic demand-side management and by boosting efficiency of transmission and distribution.

August 16, 2007

#### Building integrated environmental management system

In October 2007, KEPCO drew up a "Mid-to Long-Term Environmental Management Masterplan," which is designed to pursue environmental management more systematically and thereby achieve sustainable development.

|   | Eco-Vision                       | Global Energy Group leading the creation of eco-values   |   |  |  |  |  |  |
|---|----------------------------------|--|---|--|--|--|--|--|
| ı | Goal                             |  |   |  |  |  |  |  |
| İ | Strategy                         | Strengthen the integrated environmental management system  | Strengthen the capabilities to manage environmental risks   | Strengthen external partnership  | Preemptive response to climate change  |  |  |  |
|   | Detailed<br>Strategy             | Reinforce the organization for environmental management & raise awareness Introduce programs for environmental management Expand the integrated environmental management system across all group companies | Reduce environmental impact of business activities Minimize risk posed by hazardous substances Increase eco-friendliness of facilities Minimize waste discharge | Secure leadership in environmental management Expand ecosystem preservation programs Increase communication about eco-friendliness Minimize complaints regarding the environment | Strengthen capabilities to counteract climate change     Reduce direct emissions of greenhouse gases     Reduce indirect emissions of greenhouse gases |  |  |  |
|   | Action<br>Projects<br>(33 items) | 11 projects<br>in 3 areas  | 8 projects<br>in 4 areas  | 7 projects<br>in 4 areas   | 7 projects<br>in 3 areas   |  |  |  |

#### Goal of Environmental Management

The mid-to long-term goal of our environmental management is to enhance our environmental management capabilities up to the level of the global top 5 in the energy utility sector. To that end, we have developed and are executing strategies and action items in the four areas according to the Environmental Management Masterplan.

#### Organization Dedicated to Environmental Management

In 2004, KEPCO set up "Eco-Friendliness Specialist Group" consisting of external experts under the "Open Management Innovation Committee," the purpose of which is to assist the CEO in making decisions. In 2006, we beefed up our environment-related function as "Energy Policy Team" was reshuffled and expanded into "Energy and Environment Team." Such organizational change was a move designed to integrate and coordinate environment-related activities that used to be performed separately by individual departments. In 2008, we formed Environmental Management Committee to strengthen environmental management capabilities across the company. Moreover, to systematically pursue the green growth of GENCOs in line with the new governmental vision of "low carbon green growth", we re-organized and expanded the existing "Energy and Environment Team" into "Green Growth Strategy Team."

#### Organizational structure for environmental management CEO Open Management Innovation Committee [Eco-Friendliness Specialist Group] Head Power Technology Div. Office **Environmental** Management Committee Green Growth Strategy Team Green Construction Forum Branch Branch head Office Siting Advisory Committee Roadmap for integrated environmental management 2009 Lay the groundwork 2008 for low-carbon green Corporate-wide arowth 2007 ISO14001 certification Map out strategies for ISO14001 certification Roll out SF<sub>6</sub> CDM low-carbon green growth Set CO<sub>2</sub> emissions cut in selected areas business Roll out renewable targets Develop CDM business Carbon footprint labeling energy business strategies Acquire EDP certificate Lay the groundwork for renewable energy husiness Improve energy and

#### ■ IS014001 Certification Procedure

environmental efficiency



Each branch office at various locations nationwide carries out environmental management activities that fit their specific conditions in accordance with the environmental policy and guidelines given by the head office. In particular, "Green Environment Advisory Committee" in every transmission/substation facility nationwide was re-organized into "Green Construction Forum" in which local residents and representatives of environmental groups participate to have their voice heard.

Also in operation at the branch office level is "Siting Advisory Committee" with the participation of representatives of local residents and municipalities to ensure objectivity and transparency in site selection process for transmission/substation facilities.

#### **EMS** Certification

In October 2007, KEPCO acquired ISO14001 certification for its environmental management system at 5 transmission/distribution branch offices, and finally in 2008, the company earned corporate-wide ISO14001 certification. We are always strictly complying with the environmental laws and regulations.

#### Disseminating Environmental Values

KEPCO is making varied efforts to transform itself into a green company that can meet global standards. We are trying to internalize environmental management capabilities and enhance the environmental awareness of our employees. For example, we published an environmental management manual and introduced standard operational procedures. Also, we provide environmental education and have developed on-line classes for environmental education.



### 

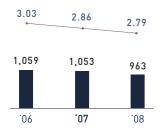
'07

'08

#### ■ Water use

Water use (1,000 tons)Water use intensity (ton/GWh)

.04



### ■ Share of eco-friendly cars in the passenger car fleet for business purpose

| Classification                              | 2006  | 2007  | 2008  |
|---|-------|-------|-------|
| Passenger care for business purposes (unit) | 1,740 | 1,747 | 1,741 |
| Compact car (unit)                          | 1.380 | 1.370 | 1.359 |
| Hybrid car (unit)                           | 16    | 57    | 60    |
| Total no. of green cars (unit)              | 1.396 | 1.427 | 1.419 |
| Share of green cars (%)                     | 80.2  | 81.7  | 81.5  |

<sup>\*</sup>Pilot operation of electric vehicles (9 units) is slated for 2010.

#### Improving Environmental Efficiency

In 2008, we revised our "Energy Conservation Guidelines" in line with the government's energy saving drive in a way that rationalizes our energy use, thereby laying the groundwork for more systematic and efficient energy use. Moreover, we made more efficient use of energy by promoting the use of high-efficiency energy equipment and power-saving office appliances, and set up an environmental management information system. These measures embody our effort to promote conservation and efficient use of energy and strengthen the mindset for energy savings.

Moreover, we plan to replace 30% of total lighting with high-efficiency LED by 2012, and as part of such effort, we are pushing ahead with a pilot project intended to replacing halogen lamps such as light bulbs with energy efficient lighting at an early stage.

#### Calculation of Environmental Expenses

We calculated our environmental expenses incurred in 2008 in accordance with eco-accounting guidelines developed in May 2008. The environmental expenses in 2008 totaled KRW 826.8 billion, which accounts for about 3% of the costs of goods sold. Most of the expenses were spent on furnishing new & renewable energy facilities, building eco-friendly power facilities, and conducting R&D aimed to address climate change issues. In 2009, we will set up environmental accounting system to promptly provide information on environmental expenses to stakeholders as well as decision-makers at KEPCO's top management, thereby improving KEPCO's environmental values.

#### Reducing Energy and Water Use

In 2008, KEPCO used 74,991 TOE of energy and 963,000 tons of water. Thanks to the use of high-efficiency equipment and improved efficiency of facility use, energy use intensity (energy use divided by electric power sold) stood at 0.195TOE/GWh, which is 0.002TOE/Gwh off of the target (0.197TOE/GWh). Water use intensity (water use divided by electric power sold) was 2.79 tons/GWh, down 0.07 ton/GWh from 2007. There was no use of recycled water.

Furthermore, we will increase the recycling rate for resource of all kinds up to more than 95% over the long term by strengthening company-wide waste recycling.

#### Environmental Impact of Company-Owned Vehicles

KEPC0 is trying to reduce pollution generated by company vehicles. The number of vehicles owned by KEPC0 for business purposes in 2008 increased by15 units from 2007 to 3,166 units, including 1,741 passenger vehicles, 81.5% or 1,419 units out of which are eco-friendly vehicles such as compact cars and hybrid cars. We will maintain the percentage of compact and hybrid cars purchased at more than 80%. Fuel consumption of company-owned cars in 2008 stood at 6,475,000l and fuel efficiency was 6.88km/L, a 0.87km/L increase from 2007.

#### Energy and water conservation efforts in 2008

Strengthen the energy conservation conservation system

Improve energy use efficiency

Install electricity-saving office equipment: 4,582 units

Enhance the role and activities of the Energy Conservation Committee (chaired by the EVP)

Intensive control of air conditioning temperatures by designated employees

Achieve the energy use reduction target (below target for the previous 2 years) by adopting energy consumption caps

Install electricity-saving office equipment: 4,582 units

Enhance awareness of energy conservation

- · Conduct energy saving campaigns
- · Disseminate best practices and conduct training in energy conservation: all branch offices
- · Have energy officers participate in professional trainings

# Resources Recycling and Hazardous Materials Management

# **Promoting Recycling**

In an effort to proactively tackle global environmental challenges, fulfill social responsibilities in the area of environmental preservation, and ultimately pursue sustainable development for the county as well as itself, KEPCO manages the rate of recycled resources used in our facilities to the extent that the stability of electric power supply is not undermined. Waste generated from our business is mostly waste concrete poles, old transmission towers, insulators and electric cables. Since they are highly valuable resources, a whopping 93.9% of them was recycled. We are committed to further expanding resources recycling by finding out recycling methods of various machines and equipment and identifying recyclable products through research and study.

### ■ Total volume of materials used

| Classification (ton) | 2006    | 2007    | 2008    |
|----------------------|---------|---------|---------|
| Concrete             | 484,206 | 574,801 | 514,795 |
| Metal                | 98,534  | 90,492  | 94,250  |
| Ceramics             | 3,207   | 4,728   | 4,510   |
| Cables               | 42,558  | 46,267  | 45,410  |
| Other                | 4,988   | 4,831   | 7,395   |
| Total                | 633,493 | 721,119 | 666,360 |

# ■ Waste generated and recycled in 2008 by type

| Classification | Generated (ton) | Recycled (ton) | Recycling rate(%) |
|----------------|-----------------|----------------|-------------------|
| Concrete       | 269,178         | 252,581        | 93.8              |
| Metal          | 21,146          | 21,146         | 100.0             |
| Ceramics       | 8,403           | 6,447          | 76.7              |
| Cables         | 6,863           | 6,863          | 100.0             |
| Other          | 3,310           | 3,111          | 94.0              |
| Total          | 308,900         | 290,148        | 93.9              |

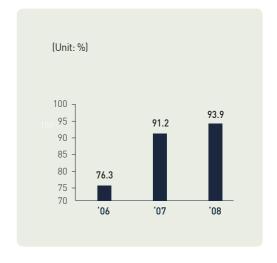
# Green Purchasing

KEPC0 is striving to increase green purchasing. In 2008, the purchase of eco-friendly products amounted to KRW 4.3 billion, which takes up 50.1% of the total value of the goods purchased such as expendables. We will take various measures to expand green purchase, such as giving additional credits to bidders certified with environmental mark in qualification evaluation, and notify procurement schedules to green product suppliers in advance and introducing centralized procurement method .

# PCBs Control

Pursuant to the Stockholm Convention (signed on May 17, 2004) and the goal set by the Ministry of Environment to completely phase out polychlorinated biphenyls or PCBs by 2015, KEPCO has formed a PCBs policy consultative panel with the participation of external stakeholders including the Ministry of Environment and professors to discuss matters regarding research funding and treatment technology development. Moreover, we set up an internal function dedicated to PCB control to study efficient analysis methods, introduced safety control guidelines for dismantlement of large –sized transformers at sites and tried to preclude the inflow of PCBs through the quality inspection system. Moreover, since we signed a PCB treatment agreement with waste treatment companies in January 2009, we have been employing ecofriendly treatment approaches in handling PCBs, thereby minimizing the adverse impact of PCBs on the environment.

# Annual resources recycling rate



# ■ Value and share of green purchasing





\*\*Target share of green purchasing for 2009: more than 54.1%

# Greening of Power Supply Chain

| Production     | Щ                              | Encourage eco-friendly management | Build integrated environmental management system  |
|----------------|--------------------------------|-----------------------------------|---|
|                |                                | at GENCOs                         | Construct and operate electricity<br>generation facilities that can co-exist<br>in harmony with local communities |
|                |                                |                                   | Improve environmental efficiency  |
|                | •                              |                                   |   |
| Transportation | <b>₩</b>                       | Build and expand eco-friendly     | Ensure objectivity and transparency in site selection   |
|                |                                | facilities                        | Build eco-friendly power facilities<br>that can co-exist in harmony<br>with local communities                     |
|                |                                | Improve                           | Reduce power loss during T&D  |
|                |                                | facility operation and management | Control EMF and protect eco-systems   |
| Sales          | . =                            | Control                           | Efficient management of peak load   |
|                |                                | electricity demand rationally     | Improve energy use efficiency   |
|                |                                |                                   |   |
|                | S. I. Hillity for Croon Engrey |                                   |   |

# Production

KEPCO is seeking greening of the electric power supply chain through close collaboration with GENCOs, such as operating a consultative body attended by the management of KEPCO and the GENCOs to coordinate between generation and transmission/distribution.

Moreover, the presidents of the GENCOs pledge to promote eco-friendly operations by signing business management contracts with KEPCO, and the progress made by each GENCO is evaluated every year.

# **Environment-Related Spending**

In 2007, all branch offices of the GENCOs acquired ISO14001 certification, and the GENCOs spent approximately KRW 729.9 billion in the areas related to the environment.

# Environment-related spending by GENCOs in 2008 (Unit : KRW mil.)

| GENC0 | Korea Hydro<br>and Nuclear<br>Power | Korea South-<br>East Power | Korea Midland<br>Power | Korea Western<br>Power | Korea South-<br>ern Power | Korea East-<br>West Power |
|-------|-------------------------------------|----------------------------|------------------------|------------------------|---------------------------|---------------------------|
| Value | 30,530                              | 243,851                    | 176,836                | 136,780                | 69,895                    | 72,093                    |

# Building and Operating Generation Facilities That Can Co-Exist with Local Communities

GENCOs are conducting environmental impact assessment to identify possible impact on the natural environment and traffic conditions in adjacent areas before constructing or expanding generation facilities. They are also conducting follow-up assessment and report the results to the government every year for the first 5 years following the completion of construction.

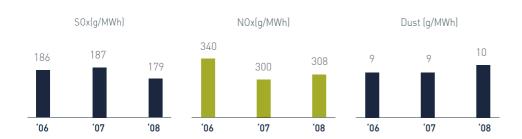
# Improving Environment Efficiency

GENCOs have installed and are operating de-sulferization systems, de-nitrification systems and dust collectors, and are increasingly using clean energy sources to reduce the emissions of SOx, NOx and dust generated during power generation.

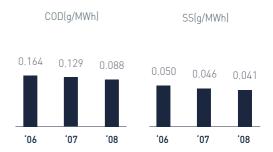
Furthermore, GENCOs are collecting all wastewater at the central wastewater treatment facility for physical and chemical treatment, which is discharged after treatment or reused. Coal fly ashes generated from coal-fired power plants, are 100% reused as a raw material for manufacturing cement. As such, we are making contribution to realizing a resource recycling society.

In 2008, GENCOs installed de-sulferization systems, de-nitrification systems and dust collectors at all of their generators, minimizing the probability of air pollution. However, CO<sub>2</sub> emissions increased 2.5% year on year due to the significant increase in the number of thermal power plants. As for water contaminants, discharges of COD and SS declined 30% and 10%, respectively, from 2007.

# Air pollutant emissions

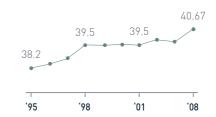


# ■ Water contaminant discharge



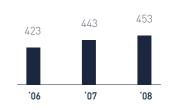
# ■ Thermal efficiency at P/P

(Unit: %)



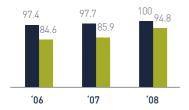
# ■ CO2emissions

(Unit: kg/MWh)



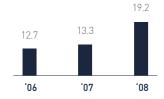
# Undergrounding of electric power facilities





# Distribution

# - % of undergrounding nationwide



# ■ Power loss during T&D



# Siting of electricity facilities

| Improve<br>the siting<br>process | KEPCO's internal standards—the Siting Advisory Committee Committee members: KEPCO, resident representatives, municipalities, etc. Contingency plan for delay: seeking advice from external organization or deliberation by the mediation board, etc. |
|----------------------------------|--|
| Engaging<br>stakeholders         | Held public sessions to inform residents in<br>affected areas<br>Visit opinion leaders to inform them of the<br>background of site selection<br>Held public sessions to explain projects<br>before starting construction                             |

# **Transportation**

Transportation of electric power is a process involving timely construction and efficient operation of power transportation facilities necessary to deliver electric energy, a driving force of the nation's industries. We are making multifaceted efforts to make transportation eco-friendly, such as securing objectivity and transparency in the site selection process; expanding the construction of eco-friendly facilities that can harmonize with local communities; reducing power loss during T&D; and, protecting ecosystems and controlling EMF radiation.

# Improving objectivity and transparency in siting process

In an effort to improve objectivity and transparency in the site selection process for T&D facilities, we are increasingly using cutting-edge scientific tools. Further, we expanded the coverage of impact assessment of electricity business to all construction projects, as part of an effort to keep communication channels open to various stakeholders in the process.

# Expanding construction of eco-friendly facilities that can harmonize with local communities

KEPCO is increasingly constructing eco-friendly electric power facilities. We use eco-friendly equipment and materials that harmonize with the neighborhood and the nature, apply eco-friendly engineering techniques, and construct eco-friendly substations.

In an effort to prevent possible damages on forest, we are increasingly applying eco-friendly construction techniques utilizing helicopters and cable cars. For instance, KEPCO applies the underground power transmission cables, with which there are no oil leakage risks, precluding the possible contamination caused by electricity facilities.

We are ensuring that the environmental considerations, such as environmental impact assessment, are incorporated from the very first stage of transmission/substation site selection, and release information on the progress of the construction schedule and the future environmental impact to be made by facility operation. In particular, we conduct extra EIAs with regard to the possible impact on the natural environment in case transmission/substation facilities are constructed in proximity to natural parks, wetland preserves, and the areas designated for ecosystem and landscape protection.

We have been operating "Underground Installation Committee" which was launched in 2003, to expand underground installation of T&D lines. Our objective is to underground 100% of transmission lines in major urban areas by 2015.

# Reducing power loss during T&D

We are making various efforts, such as upgrading T&D voltages, expanding the capacity of T&D lines, and utilizing highly reliable equipment, to reduce power loss in the T&D stage. As of 2008, we are maintaining the power loss rate at 4.01%, one of the world's lowest levels. As a result, we were able to cut power generation cost (KRW 280 billion per 1% point of power loss per annum, as of 2008), minimize the need for additional generation facilities and contribute to reducing greenhouse gas emissions.

# EMF control and ecosystem protection

EMF is a kind of electromagnetic energy generated by a flow of electricity or magnetic fields. Electromagnetic waves radiated from electric power facilities are weaker than those generated by home appliances. Moreover, according to the World Health Organization (WHO) and the National Cancer Institute (NCI) of the U.S., electromagnetic radiation has minimal impact on humans and animals. For scientific control of EMF, KEPCO has been conducting related research and embracing opinions through various channels.

The land area occupied by power facilities within ecosystem reserves totals 9,794km<sup>2</sup>. We are refraining from building new transmission lines in the areas designated as ecosystem reserve while seeking to preserve biodiversity.

**15** Creative Life&Human KEPCO Sustainability Report 06 Third Party Review
KEPCO Sustainability Report

**07** GRI Index KEPCO Sustainability Report **08** Appendix KEPCO Sustainability Report

# Sales

KEPC0 is endeavoring to strike a balance between supply and demand of electric power through active and systematic demand-side management (DSM) and improve the efficiency of its facilities operation. By doing so, we are contributing to the energy conservation policy at the national level.

In 2007, KEPCO reduced 4,104MW of electric power demand, which is more than the electricity generated by four 1,000MW-class nuclear power plants combined. This accounts for 69.0% of the national DSM target. Meanwhile, the load factor, a measure that indicates the degree of utilization of electric power facilities, stood at 76.6% at KEPCO, recording one of the world's top levels.

# DSM support programs

| Classification            | Program  | Incentive  |
|---------------------------|--|--|
| Load<br>management        | Fixed period demand control Weekly forecasting demand control Emergency saving Ice storage cooling system Direct load control Remote-controlled A/C Peak demand controller | KRW760-930/kW adjusted KRW350-580/kW adjusted KRW270/kW saved KRW350,000-480,000/kW reduced Base subsidy (KRW 375/kW) + control subsidy KRW 310,000~1.88mil. (depending on model) KRW1.50 mil./unit. |
| Efficiency<br>improvement | High-efficiency lighting device<br>High-efficiency inverter<br>High-efficiency transformer   | KRW1,400–59,000/unit installed<br>KRW130,000~170,000/kW saved<br>KRW 400,000–5.3 mil. (depending on capacity)  |

# Efficient Management of Peak Load

KEPCO is managing peak load efficiently through various load control programs, expanding use of ice storage systems, and developing and disseminating technology-intensive demand control techniques. As a result, KEPCO successfully lowered summer peak load by 3,110MW in 2008.

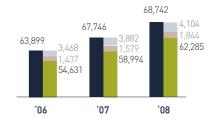
# Improve Efficiency of Electricity Use

We have been striving to increase efficiency of energy use at the national level by resetting the portfolio of subsidized high-efficiency devices and enhancing energy efficiency consulting. In 2008, we continued our effort to encourage efficient use of energy, expanding support for introduction of new high efficiency equipment including smart lighting control system and continuing energy efficiency consulting services for large-volume customers. These efforts resulted in an 11% increase year on year in distribution of high-efficiency equipment equivalent to 1,174MW. Distribution of high-efficiency devices enabled us to save 2,792GWh of energy in year 2008 alone.

In an effort to improve the efficiency of electricity facility use, KEPCO will operate the load control system more flexibly by linking it with electricity reserve levels and also lay the ground work for web-based interactive DSM system.

# ■ DSM performance





# Efforts to control summer peak load in 2008

# Strengthen summer peak load management

- · Improve load control efficiency by introducing a certain period of flexible operation considering supply and demand conditions, that is, applying varied incentives depending on period
- · Pursue R&D aimed to introduce interactive load control business

# Expand cooling demand management business and develop related technologies

- · Promote the use of ice storage systems and remotely controlled air conditioners: 623MW
- · Develop cooling load control technology and conduct a pilot project
- · Develop and commercialize ice storage cooling showcase

### KEPCO's efforts to improve the efficiency of electricity use in 2008

# Resetting the portfolio of subsidized highefficiency devices

- · Enlarge the subsidy for new types of high-efficiency device
- Metal halide lamp : reduced power consumption by 30%
- Smart lighting control system: reduced power consumption by 30%

# Form the environment for low-carbon green growth

- · Conduct R&D aimed to support next generation LED lighting and lay the groundwork for 2009 projects
- · Develop IT-applied new DSM technologies

# Responding to the Convention on Climate Change

Structure of Electricity Technology & Climate Change Collaboration Committee

# Electricity Technology & Climate Change Collaboration Committee

Chair: CTO (KEPCO)

Member: Executives (6 GENCOs)

Mission : Make key decisions regarding climate change, the environment and renewable energy

# Working Group on Climate Change

Member : Team leaders from KEPCO and 6 GENCOs

Role: Exchange information on climate change

Working Group on Renewable Energy

**Member** : Team leaders from KEPCO and 6 GENCOs

Role : Coordinate renewable energy efforts

# KEPC0 KHNP South-East Power Midland Power Western Power Southern Power East-West Power

### Impact on power industry

- · Increase in purchase prices due to rising generation costs
- New business opportunities arising from the Climate Change Convention
- Growing demand for proactive development and distribution of renewable energy
- Change in generation fuel mix with caps imposed on volumes of fossil fuels

# Strategies at the group level

- · Establish systems to proactively respond to the climate change convention as it took effect
- · Build a system for reducing greenhouse gas emissions and make preparations for utilizing the Kyoto mechanism
- Promote development and distribution of new & renewable energy technology and lay the groundwork for commercialization
- · Set up low-carbon energy systems based on higher energy efficiency

# Strengthening Group-level Joint Response

Under the "Kyoto Protocol," which took effect in February 2005, Korea is not required to cut greenhouse gas emissions. Still, it is highly likely that Korea will have to join the 2nd round of reduction scheme from 2013. If Korea is subject to an obligation to reduce greenhouse gas emissions, it will have a huge impact on KEPCO's business because about 26.7% of total  $CO_2$  emissions in Korea is caused by the electric power sector. Under the circumstances, KEPCO and the GENCOs see both challenges and opportunities for their business in climate change issues, and are endeavoring to efficiently respond to them.

KEPCO and the GENCOs re-organized and expanded the existing Climate Change Collaboration Committee into "Electricity Technology & Climate Change Collaboration Committee" in an effort to proactively participate in the preservation of the earth's environment and establish a sustainable energy system ready for the shift in energy paradigm (Jun. 2008) The Committee is chaired by the CTO of KEPCO with executives from the GENCOs participating as members. Two working groups on climate change and renewable energy are operated under the Committee, adding momentum to the operation of the Committee.

In July 2005, KEPCO and GENCOs signed an agreement with the Korean government on the supply of renewable energy. Under the agreement, we invested KRW 520.1 billion over 3 years from 2006 through 2008 in furnishing renewable energy facilities equivalent to 63MW. During the second contractual term from 2009 to 2011, we will invest a total of KRW 2.3983 trillion in this area (facilities with capacity of 633MW).

# KEPCO group companies' joint response to the Climate Change Convention

# Response

Develop an application for capturing statistics on greenhouse gas emissions generated by group companies

Research project for calculating potential reductions in generation and T&D areas

# Future plan

Set voluntary greenhouse gas reduction targets for KEPCO and group companies

Set up online greenhouse gas control system for group companies

# Scheme for countering climate change

### Goal Create a new growth engine through preemptive response to climate change Step up efforts for Expand R&D Build infrastructure Obtain carbon credits Execution reducing greenhouse area Develop CDM business $CO_2$ recovery/ treatment Set voluntary reduction Greenhouse gas technology management system Register greenhouse gas reduction Technologies to replace Group-level joint response Action Item Low-carbon energy mix fossil fuels Rationalize energy use Invest in carbon funds Strengthen internal capabilities

# Reducing Greenhouse Gas Emissions

Greenhouse gas emissions generated by KEPCO and the 6 GENCOs can be broadly classified into two types: direct emissions, such as  $CO_2$  emissions caused by fossil fuel burnt at power plants and  $SF_6$  emissions from switches in power systems, and indirect emissions resulting from power loss during T&D.

In 2008, greenhouse gas emissions from KEPCO group companies, including the generation segment, totaled 190.6 million tons, 11.3 million tons of which came from KEPCO. Emissions caused by KEPCO consist of direct emissions ( $SF_6$ ) and indirect emissions (gas exhaust and power loss during T&D).

In 2007, we developed a greenhouse gas emissions management system that meets the international and national standards, and in October 2008, we proved objectivity and reliability of the system and our emission statistics through "greenhouse gas inventory verification" (KEMCO CDM Certification Office). On top of that, we acquired a carbon footprint certificate issued by the Ministry of Environment, becoming the first public enterprise that has ever received a carbon footprint certificate. Under the carbon footprint labeling system, greenhouse gas emissions coming from T&D power supply lines are converged into CO<sub>2</sub> emissions.

Meanwhile, KEPCO is pushing for CDM business at home and abroad as a way to actively cope with the climate change convention. We sought for wind power business opportunities in overseas locations like Gansu Province, China, and as a result, acquired greenhouse gas credit of 420,000 tons. Domestically, we acquired 110,000 tons of carbon credits per annum through photovoltaic power generation by Donghae Thermal Power Plant.

# Developing Eco-friendly Technologies

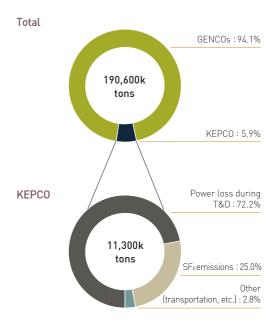
KEPCO owns a world-class carbon capture and storage technology which helps save 30% or more in CO<sub>2</sub> collection cost. Meanwhile, various CO<sub>2</sub> emission reduction technologies are under research and development at KEPCO, such as pulverized coal combustion technology, ultra supercritical power generation technology, circulating fluidized-bed combustion technology, pollution control technologies like de-sulferization and de-nitrification, and commercialization technology for 300MW-class IGCC.

Moreover, KEPCO formed a strategic alliance with POSCO to lay the groundwork for fuel cell business, and is carrying out a total of 30 projects, including construction of a test plant for 300MW-class Korean-model IGCC.

# ■ Core technology development in new & renewable energy in 2008

| our cicciniote         | agy development in new a renewable energy in 2000  |
|------------------------|--|
| Fuel cell              | 250kW-class MCFC system commercialized<br>5kW-class SOFC system developed<br>Metal-supported SOFC end cell developed   |
| Wind power             | Field test on network-connection of offshore wind turbines (Northern Jeju)  Feasibility study on middle-size sea wind power generation in the Korean offshore  Condition monitoring system for wind farm complex developed   |
| IGCC                   | Construction of a Korean-model IGCC test bed and test operation  |
| Photovoltaic<br>energy | A technology that optimizes the performance of dry regenerable sorbents for CO <sub>2</sub> capture from exhaust gas from power plant developed(a 0.5 MW CO <sub>2</sub> capturing test using dry sorbents, in Oct. 2009, Hadong Thermal P/P)  CO <sub>2</sub> collection in pre-combustion for next-generation coal power plant developed  CO <sub>2</sub> separation and collection in post-combustion for coal power plant using wet alkanolamine |
| Hydrogen<br>energy     | Test bed infrastructures for research on electricity industry PV system and filed test constructed   |
| Bio-energy             | 5MW-class bio gas turbine CHP(combined heat and power) system developed (reclaimed land in the metropolitan areas)  MGT(micro gas turbine) technology using gas from reclaimed land (pilot operation of sanitary landfills in Gwangju Metropolitan Area)   |

# ■Greenhouse gas emission by sector(2008)



# ■ Greenhouse gas emissions statistics system

Coverage KEPCO and 6 GENCOs

**Progress** Emission statistics program developed and tested: Jan. ~ May 2007

Guidelines set for building a database of greenhouse gas emissions statistics: Sep. 2007 Greenhouse gas inventory verification: Oct. 2008

# ■ CDM business strategies

Strategy I Shift the focus from domestic and international business activities toward CDM business

- Accumulate business development experience and get involved in more projects

Strategy II Establish CAMS

- Build capabilities for effectively obtaining and selling emission credits

Sustainable development through creation of new growth engines

# Synergetic Society





# Leader of Open and Transparent Management

# Development of KEPCO's ethical management system

# Ethical management becoming the corporate value of KEPCO Make ethical management part of the corporate culture Map out KEPCP-specific sustainability model Share corporate values globally Integrity corporate culture taking roots Strengthened the enforceability of ethical standards Improved ethical level diagnosis

# Ethical management disseminated

Ethical standards introduced Link vision and ethical management Management disclosure mainly centered on information disclosure

# Hierarchy of ethical rules and standards at KEPCO

Diversified disclosure in customer



# Clean Power-KEPCO 9.9

KEPCO's ethical management brand that reflects its commitment to achieve the highest level of integrity by introducing global standards and pursuing continued mind innovation to materialize the vision "Global Top 5 Utility"

# Corporate Culture Built on Integrity and Ethics

To achieve the ethical management goal of Clean Power-KEPCO 9.9, in 1996, KEPCO enacted the Code of Ethics, for the first time in the nation's public sector, and has been vigorously seeking ethical management since 2002.

In October 2007 we introduced internal ethical level diagnostic tools such as KEPEX and PowerEQ, and strengthened the feedback system. In 2008, we completed the 5th revision of KEPCO Code of Conduct, criteria for employees' ethical decision-making and behaviors, to enhance the practicality of the ethical rules. Furthermore, Grade1 officers had their personal properties registered voluntarily to set an example in integrity promotion campaigns, and all employees completed 5.8 hours per year of ethical management and integrity education courses. Indeed, we exerted efforts to ensure that self-regulated ethical corporate culture takes root through various programs including the whistle blowing system (4 cases corrected and rewarded in 2008) and collecting ideas on anti-corruption(427) from employees.

As a result, according to 2008 integrity survey conducted by the Anti-Corruption and Civil Rights Commission, KEPCO ranked first among 381 public organizations, proving its transparent and ethical management practices.

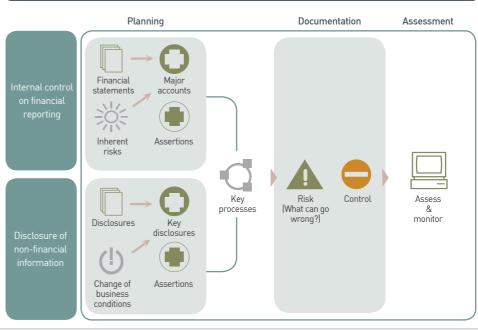
Rather than being complacent with the current status, we will continuously strive to achieve the goal of Clean Power -KEPCO 9.9 by pursuing customer-oriented innovation and mind innovation of employees and faithfully fulfilling our social responsibilities.

# Improving Accounting Transparency

As a company listed on New York Stock Exchange, KEPCO has implemented a global-standard accounting system for internal control, which exceeds the requirement of the Sarbanes-Oxley Act. There are control procedures in place at KEPCO for all possible accounting risks and the findings from the internal control system (24 weaknesses detected in 2008) are reported to the BOD and the Audit Committee on a regular basis.

KEPCO has established an ERP-based "Internal Control Evaluation System" in March 2007 to assure the accounting transparency that meets the global standard, and set up an "Accounting Center" in the following July to enhance the expertise and efficiency of accounting practices. Moreover, in preparation for mandatory application of IFRS beginning 2011, we worked out a group-wide standard accounting policy in 2008, and currently in 2009 we are setting up group-wide financial system based on IFRS. We will later establish a final accounting policy and application plans for successful transition into IFRS.

# ■ Internal control system – global standards



# Transparent and Fair Contracting

KEPCO is improving fairness and transparency in the contracting process through innovation.

We have made various efforts to enhance transparency in business contracts including "Integrated e-Commerce Platform" launched in 2004, a portal system introduced in 2006 to promote integrity among our suppliers, and a system to receive complaints on a contract basis introduced in 2007, which is unprecedented in Korea.

In 2008, in particular, we set up a system to incorporate customer opinions in each contractual process, introduced real-name contracting policy, online submission of maintenance bonds and automated issuance of performance certificate, total online service for foreign contractors, thereby improving transparency in contracting process.

The percentage of human rights evaluation for the suppliers stood at 12.54% (789 out of 6,289 cases), and KEPCO is giving extra credit to the suppliers that show better performance in hiring the disabled and female workers. We are also having our suppliers incorporate relevant provisions of the Minimum Wage Act and Labor Standard Act into their employment contract in order to protect the basic human rights of their employees.

As a result, satisfaction with suppliers in 2008 significantly improved from 2007(88.2-93.3 points in service performance, and 94.5-96.8 points in integrity).

# **Expanding Open Communication Channels**

KEPCO is eagerly disclosing its management information and endeavoring to build consensus among its stakeholders on major issues. For this purpose, we are operating various committees and forums participated by outside specialists from the government (municipalities), the press, businesses, universities and NGOs.

For effective complaints management and reasonable complaints handling, KEPCO streamlined its complaints receiving channels into the one-stop window on its website. In September 2007, "complaints ombudsman system" was introduced to objectively monitor the validity of major complaints handling cases.

Customer surveys on our online service prove that we are persistently striving to enhance customer satisfaction by providing prompt and accurate service. For instance, response promptness of cyber branches and satisfaction with feedback stood at 97.8% (giving feedback within 1 hour from receiving complaints), and 4.4 points(on the scale of 5 points, customer evaluation via email), respectively.

We will continue to embrace opinions and feedback of various stakeholders, thereby improving our corporate image as a global company.

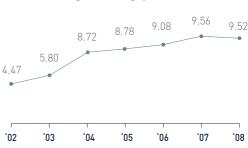
# Serving Shareholders' Right to Know

KEPCO is exerting effort to serve the right-to-know of our stakeholders and improve transparency of business management. To do so, we disclose the key management information through various means including disclosure of management information, integrated disclosure, corporate disclosure and information disclosure.

We further enhanced the right-to-know of stakeholders in 2008. For instance, the number of disclosure items increased 39% year on year [291 $\rightarrow$ 404] and the rate of disclosure upon customer requests was also raised from 92.6% to 93.3%, which indicates that we have strived to improve customer confidence .

# ■ Integrity improvement

- Points indicating KEPCO's integrity level



# Electronic procurement

98.7 98.8 90.7 90.7 106 '07 '08

# Committees and forum operation in 2008

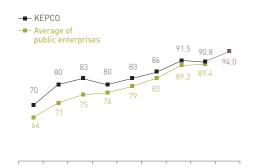
| Classification                              | Frequency | Composition & activities   |
|---|-----------|--|
| Customer Satisfaction<br>Advisory Committee | 256 times | 688 members<br>(64 branch offices nationwide)<br>Hearing local community's<br>opinion, etc.  |
| Green Environment<br>Advisory Committee     | 15 times  | 142members<br>(power transmission district<br>offices nationwide),<br>Information disclosure of power<br>transmission business, etc. |
| KEPCO Development<br>Strategy Forum         | Quarterly | Introduced in Dec. 2008<br>(29 members)<br>4 areas including mid-to long-<br>term development strategy                               |

# ■ KEPCO Information Disclosure System

| Classification            | Recipients                  | Frequency   |
|---------------------------|-----------------------------|---|
| Management<br>Disclosure  | General public              | Regular/<br>On-demand   |
| Integrated<br>Disclosure  | General public              | Regular/<br>On-demand   |
| Corporate<br>Disclosure   | Investors &<br>Shareholders | Regular, fair<br>disclosure,<br>voluntary<br>disclosure, etc. |
| Information<br>Disclosure | Person requesting           | Within 10 days<br>from the request                            |
| Internal<br>Disclosure    | Employees &<br>Labor Union  | On-demand   |

# Growing Together with Stakeholders

# ■ Service satisfaction in government survey



NCSI: The government takes survey of customer satisfaction for public enterprises and announces the appraisal results every year. [KEPCO has been given the highest grade for 9 consecutive years since 1999.]

'05

'06 '07

'08

# ■ Efforts to Improve Customer Satisfaction

104

### Customer satisfaction management

'01

'02 '03

Established customer center-exclusive response system and service evaluation system

Improved "Anytime Anywhere" electricity bill payment system Conducted "Electricity Academy Education" to large-volume customers

Observed the Electricity Service Charter, and operated service indemnity system, etc.

# The world's highest electricity quality

Expanded application of manufacturer quality rating and improved automation of electricity distribution

Introduction of IT-base facility diagnosis technology and its improved operation

Prevention of power outage caused by customers' transformers

# IT-based quality services

Receiving electricity ordering application online: visiting or paperwork not required

Receiving request to move electricity poles online

Implementing the mobile tariff billing/payment system using cell phone

# Customer consultation channels

Introducing and operating VOC system : call centers, Internet, branch offices

Identifying customers needs using advanced techniques: : FGI research, etc.

Carrying out various events to hear customer opinions: collecting ideas on service

# Enhance safety of electricity use

Replaced old transformers for apartment complexes: KRW 9.1bil. [270,000 households]

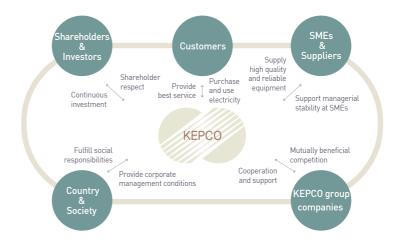
Introducing new/expansion construction site management system, and producing and distributing animation on safety and accidents : accident rate dropped (12 in 2007—8 in 2008)

# Enhance customer privacy protection

Information protection authentication received for the cyber branch, introduction of official certificate system

Codification of customer information protection and regular check on areas to improve [hacking prevention], etc.

# Social Responsibility Regarding Stakeholders



# **Prioritizing Customer Satisfaction**

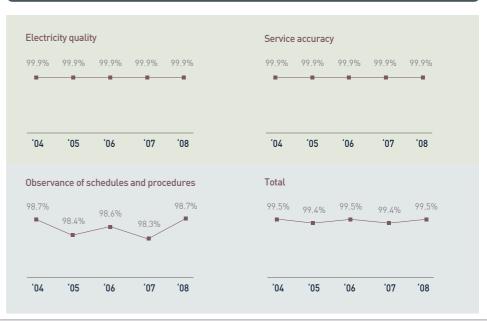
Recognizing "Respect for Customers" as one of its core values, KEPC0 is endeavoring to maximize customer value through customer service innovation and system improvement to keep up with the fast-changing business environment.

KEPCO has been providing the world's highest quality electricity service. In 2008, we reduced the annual average power outage time per household to 16 minutes, through increased automation of power facilities operation and scientific tools for facility diagnosis.

Moreover, we regularly conduct customer satisfaction surveys to receive feedback on our service. And we have stepped up our efforts to ensure safe use of electricity by consumers, while rigorously observing laws and regulations regarding protection of customer information and privacy, and carrying out service activities in compliance with the relevant regulations.

KEPCO will continue to provide high quality electricity through introduction of new customer-oriented service and innovative electricity quality management, and also endeavor to expand electricity service to the underprivileged.

# Observance of Customer Service Charter (%)



# Unwavering Commitment to Maximizing Returns to Shareholders

KEPCO is actively pursuing corporate management that puts top priority on shareholder returns through systematic and consistent IR activities.

Due to adverse business environment, such as skyrocketing fuel prices, KEPCO suffered KRW 2.9525 trillion in net loss in 2008. Although we previously maintained a high level of dividend payout rates (30%), there was no payout in 2008. Facing financial difficulties, however, we exerted all-out efforts to improve corporate credibility and satisfy the right-to-know of investors through IR activities at home and abroad under the leadership of our top management.

In 2008, KEPCO's average share price recorded KRW 29,000, a 25% decline from KRW 39,650 in 2007. As for international credit rating, KEPCO maintained A2, the same rating as Korea's sovereign rating. KEPCO is persistently striving to improve our corporate value by streamlining management through austerity measures and profitability improvement and nurturing new growth engines.

# Win-Win Cooperation with SMEs

KEPCO supports SMEs that take up more than 70% of total electricity equipment procurement. In 2009, we provided KRW 20.2 billion worth of assistance, and as a result of our drive for purchasing from SMEs, currently 76% of KEPCO's procurement comes from SMEs.

For the first time among public enterprises, KEPCO has introduced various financial support programs such as network loan, joint procurement loan and electronic order loan, in order to provide practical and substantial assistance to SMEs. In 2008, particularly, we supported SMEs through more various assistance, that is, supporting single PPM quality improvement (35 SMEs, KRW 3.9 billion) and NET & NEO certification, continuing to implement "benefit sharing scheme."

Meanwhile, KEPCO allows SMEs to utilize its brand power, as part of effort to help SMEs' entry into overseas markets. In 2008, we supported SMEs in their overseas marketing in 7 occasions including exhibitions in Russia and US.

As a result, KEPCO was recognized officially for its contribution to promoting SMEs, receiving the presidential award for best SME supporter organization in 2008. We will continue to support SMEs, particularly in their addressing liquidity crunch and thereby to help them overcome global economic recessions. And we will more actively pursue joint global marketing in selected export target markets through operation of a dedicated overseas marketing team.

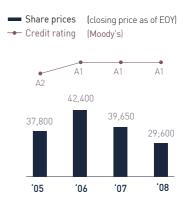
# IR activities at home and abroad

| Classification  | Description                          | Remark                                     |
|-----------------|--------------------------------------|--|
| IR conference   | Attend and open IR conference        | At home and abroad (more than 12 times )   |
| Conference Call | Quarterly report                     | To global investors (4 times )             |
| 1:1 Interview   | One to one counseling with investors | Average 10 times per week                  |
| Credit rating   | Annual meetings for credit appraisal | Moody's, S&P , etc.<br>(more than 5 times) |
| Cyber / other   | Web site, E-mail, telephone, etc.    | Random                                     |

# Dividend payout



# ■ Credit rating & share prices



<sup>\*</sup> Adjusted to A2 in Mar. 2009 (same as Korea' sovereign rating)

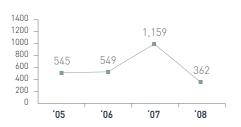
# ■ SME supports (2008)

|  | Amount           |  |  |
|--|------------------|--|--|
| Area   | (KRW<br>100mil.) | Description  |  |
| Electronic<br>machinery<br>technology<br>development | 91               | Support for technology development   |  |
| Joint R&D  | 52               | Funding for R&D in product<br>development<br>Purchase of developed<br>products |  |
| Development<br>of IT-based<br>management             | 35               | Development of information system IT software support                          |  |
| Overseas<br>marketing                                | 12               | Support for export and marketing channels                                      |  |
| Strengthening<br>quality com-<br>petitiveness        | 12               | Support for quality certification of electronic power equipment, etc.          |  |
| Total  | 202              |  |  |

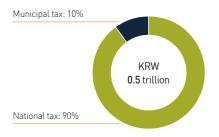
\*2009 target assistance: KRW 24 billion

# Newly-hired employees

# (Unit: No. of person)



### ■ Tax payment (2007)



# ■ Group-wide joint efforts for development in 2008

# Rationalization of the generation segment management

- Set 6 key tasks to rationalize the management of the generation
- Cost-efficient procurement of power generation fuels, stream lining of overseas businesses, integrated management of power plant maintenance & repair materials, establishment of groupwide ERP system, integration of IPR, streamlining of construction personnel management
- Pursued austerity management at the group level: KRW 455.7 billion saved (2008)

# Reliable electric power supply

- Seamless preparation of electric power supply through timely completion of power plant construction : 64,084MW(Jun, 2009)
- Phenomenal improvement in the reliability of power generation facilities: 79% fall in forced outage rate

# Economical procurement of power generation fuels

- Pursued integrated procurement of fuels to ensured reliable fuel supply and reduce fuel costs
- Joint procurement of Chinese coals in 1H 2009 : KRW128 billion of cost saving

# CEO meeting of Group companies

- Joint coordination and response to pending issues facing the management and exchanges of best practices
- Strengthen feedback on management performance through management performance analysis

# Contributing to the Nation and Society

KEPCO is contributing to the nation and the society by creating jobs and paying taxes .

We are actively supporting government policies by creating new jobs for young adults, hiring more women and disabled people, and expanding employment of those holding degrees in science and engineering. In 2008, KEPCO hired 362 new employees and 200 new interns.

KEPCO paid KRW 0.11 trillion in taxes in 2008. We received no donations from political parties or political groups, but we did receive KRW 667.9 billion of government subsidies, which was intended to offset losses incurred from freezing electricity tariffs. In 2008, the Korea Fair Trade Commission rendered a corrective order to KEPCO, and in connection with electric power facilities, we disbursed KRW 86.1 billion in compensation for land with overhead transmission lines.

# **Growing Together with Group Companies**

To grow together with group companies, KEPCO pursues mutually beneficial, "win-win" competition conducive to operational efficiency and performance enhancement based on autonomous and accountable management practices. On the other hand, for the areas requiring industry-wide development and synergy effects, such as overseas business and government-commissioned projects, we are taking advantage of close cooperation mechanisms, such as top management(CEO) meetings for specific matters.

Similarly, we are operating a cooperative mechanism to ensure reliable power supply and enhance group-wide capabilities. For instance, we are undertaking joint fuel procurement for efficiency, and enhancing collaborative R&D system, pursuing joint participation in overseas projects and jointly responding to climate change.

In addition, to encourage mutually beneficial competition, we facilitate autonomous and accountable management of group companies and conduct ex-post management performance evaluation. We are also enhancing our corporate value through ethical management and continuous managerial innovation.

# Achieve the growth of all Group companies

# Enhance competitiveness and create synergy effect

# Competition among GENCOs that can result in win-win KEPCO competition GENCO Improve corporate value

- Reduce costs and improve productivity
- Dedicated to finding more diverse sources of income
- Improve the reliability of power supply and facility efficiency

# Cooperation amongst GENCOs to achieve their growth simultaneously



# Strengthen the collaboration mechanism

- Jointly respond to fuel procurement
- Jonintly advance into overseas business
- Joint R&D

# Social Contribution

# Persistently undertaking social contribution activities in Korea

KEPCO is fulfilling its social responsibilities by carrying out social contribution activities, often dubbed as the "third part of company management." And we are refining the win-win model that allows us to grow together with society as a whole. We are aligning social contribution activities with our business strategies to motivate employees to voluntarily participate in social services, and promoting them as an inherent part of the corporate culture at KEPCO.

# KEPCO Social Service Team

Since its beginning, the KEPCO Social Service Team has never spared time and energy in giving a helping hand to people in need. Its members are participating in social activities mostly as home helpers. Their efforts to "bring light to the world and love to our neighbors" include various social contribution activities in the fields of welfare, culture, the environment and disaster relief. Their activities are financed by "Love Fund" [KRW1.3billion] voluntarily raised by the KEPCO employees and "Matching Grant" [KRW2.6 billion], a subsidy provided by KEPCO.

# Protecting the Basic Right to Energy

KEPCO has been committed to strengthening its service to the underprivileged people such as those with low income in an effort to protect their basic rights to energy use.

We postponed forced electricity disconnection during extremely hot and cold seasons (July – September, December – February) for residential customers, and in 2008, we put off electricity disconnection for 2.03 million households (worth KRW 161billion). For those residential customers subjected to forced disconnection due to delinquency, we provide the minimum service by installing "current limiters" on their premises.

Moreover, we apply discounted tariff rates to the disabled, veterans, national independence patriots, welfare institutions and national welfare beneficiaries.

# Various Social Contribution Programs

KEPCO has raised "Ray of Light Fund" for low-income households disconnected from electricity supply, and in 2008 alone, a total of 1,289 households have benefited (KRW 300 million). Since its beginning in 1999, our campaign for finding missing children contributed to finding and sending 105 missing children back home. Other social activities include blood donation (1,090 employees participated in 2008), forging sisterhood between a service group(212 towns) and social activities in communities nearby KEPCO's facility operation(57 towns).

Meanwhile, we are providing opportunities to our community and the underprivileged to enjoy cultural events through "Hope, Love, Sharing" concerts, "KBS-KEPCO music concourse" for new musicians, "Museum Visits for Angels" program and operation of KEPCO Art Center.

In 2008, we participated in a coin donation campaign and donated "Love Coins" (KRW 36 million) to the international campaign for hungry children.

# Social contribution activities at home in 2008

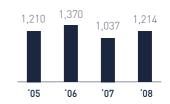
| Program                         | Description   |
|---------------------------------|---|
| Support for the underprivileged | "Ray of Light Fund": assistance to 1,289 disconnected households (KRW 300 million) "A request concert for Angels" for underprivileged children: 15,674 children   |
| Finding missing children        | • Posting photos of missing children on the electricity bills(since 1999) • Puppet show 'Kokkogi' to prevent children from missing : 52 times   |
| Support for rural communities   | • One service group – one farming village sisterhood : 212 rural communities nationwide<br>• Send newspapers to elementary schools in isolated areas : 595 copies to 110 schools  |
| Support for education           | <ul> <li>Study helpers at community learning centers: 130 children at 39 centers</li> <li>Grant scholarship to Mokpo Engineering High School</li> <li>(one company-one high school sisterhood): KRW 30 million</li> </ul>   |
| Culture and art                 | <ul> <li>"Hope, Love sharing concerts" (small and medium city tour concerts): 24 rounds</li> <li>KBS-KEPCO music concourse: find new talented musicians</li> </ul>  |
| Support for the disabled        | Give preference to the disabled in hiring and expand disability employment [489 people] Tariff discount for the disabled: 20% off Installed wireless switches for the disabled without mobility   |
| Others                          | Voluntary social service activities for towns nearby electricity facilities: 57 villages (5,197 households) Company-wide blood donation campaign: 1,090 participants Collaborative social service activities with associated congrigations including the Blue House, etc. |

# Operation of KEPCO Social Service Team

| Classification                   | 2006   | 2007   | 2008   |
|----------------------------------|--------|--------|--------|
| No. of activities<br>(Frequency) | 6,525  | 6,924  | 8,208  |
| Participants<br>(Cumulative)     | 45,379 | 46,338 | 48,742 |

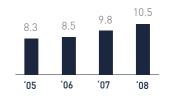
# Social contribution as a share of ordinary profit

(Unit: KRW 100mil.)



# Social volunteering hours per employees

(Unit : hour/person)



# Tariff discount for the underprivileged

| Classification          | Dis-<br>Eligibility count<br>rate(%)         |      | Discounted value<br>(KRW 100 mil.) |     |
|-------------------------|--|------|------------------------------------|-----|
|                         |  | 2007 | 2008                               |     |
| Disabled                | Grade 1~3                                    | 20   | 516                                | 541 |
| Low-income<br>class     | national<br>welfare benefi-<br>ciaries, etc. | 20   | 197                                | 252 |
| Welfare<br>institutions | _  | 20   | 72                                 | 132 |

# **Expanding Social Contribution Programs Abroad**

We are developing and carrying out social contribution programs for the local communities in our overseas sites of operation, such as the Philippines, which is also conducive to laying the groundwork for successful localization and improve our corporate image. As a global company, we are fulfilling our social responsibilities through our social service programs including medical assistance, scholarships and support for the community around the power plants.

Particularly in the Philippines where we have a major overseas operation, KEPCO is supporting telephone service projects in farming and fisheries communities, a project that is intensively pursued by the Philippine government. To facilitate progress in the telephone service project, we divided the project into On-Grid and Off-Grid by characteristics and are pursuing them separately but simultaneously. On-Grid project is about expanding power transmission/distribution lines, while Off-Grid is about building photovoltaic power generation system.

Furthermore, KEPCO is trying to hire more local talents and ensure equity in wage and promotion. We are faithfully working on addressing power shortages in the local areas and making contribution to the development of the local communities.

### KEPCO's social contribution activities in the Philippines







# Overseas social contribution highlights (the Philippines)

| Program                                    | Description   |
|--|---|
| Medical support                            | • Provide medical supplies and health check-ups, "Dental Day" service<br>- 8 rounds so far, served an annualized 9,210 people   |
| Scholarship                                | Scholarship for 7,210 students, financial assistance to 33 institutions   |
| Support for community near the power plant | Tree planting, restoration of water pipes, construction of access roads, etc. A total of 98 times of donation and support   |
| Electrification of rural areas             | Line expansion (On-Grid): completed in 64 areas(Dec. 2009) Photovoltaic power (Off-Grid): construction started in 136 areas (Jun. 2008)                                   |
| Support for education of the youth         | Financial support for local orphanages, skills training for the youth such as welding classes     Donation of books and computers, renovation of toilets in local schools |

# Wage and local manager ratio at overseas sites

| Classification   | Site            | 2006   | 2007  | 2008  |
|--|-----------------|--------|-------|-------|
| Minimum wage by law/Wage<br>for newly hired (KRW10,000, month) | The Philippines | 15/106 | 16/47 | 19/32 |
|  | China           | 5/18   | 6/22  | 8/24  |
| Local manager ratio (%)  | The Philippines | 50.7   | 47.2  | 43.8  |
|  | China           | 73.7   | 73.7  | 75.0  |

# Employment of local workers (head count)

| Area            | 2005 | 2006 | 2007 | 2008 |
|-----------------|------|------|------|------|
| The Philippines | 233  | 246  | 276  | 277  |
| China           | 69   | 151  | 152  | 27   |

 $\divideontimes$  The number of staffs in local branch office in China reduced as Wuzhi project was completed in 2008



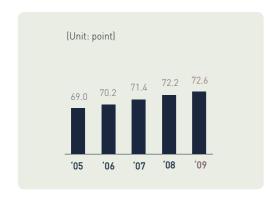
# Creative Life & Human





# Improving the Quality of Life (Work-Life Balance)

# Employees' satisfaction with KEPCO welfare policy



# Outplacement after retirement

Retiree outplacement

Specified & specialized training for retiring employees
Create a database on retirees
Provide outplacement service

Sources of income after retirement

Retirement insurance plan National Pension Fund Retirement pension

# Union membership



# Operating a Forward -Looking Welfare System

KEPCO provides various programs focused on work support, self-development, leisure and culture, healthcare, children's education and housing, seeking a work-life balance for our employees. We are brining more vitality to our company by boosting employees' morale through operation of efficient welfare programs.



In 2008, KEPCO spent KRW 216.2 billion on employee welfare, which translates into KRW 10.35 million per employee. In the 2008 survey on employees' satisfaction with the company's welfare system, the satisfaction level stood at 72.2 points, up 0.8 points from 2007.

Moreover, we are continuously developing programs designed to help "soft-landing" of talented new employees. In 2008, the share of those who left the company against total number of new employees stood at 2.7%, which is below 3%, a target turnover level.

# Outplacement

Considering that Korea is becoming an aged society at a rapid pace, KEPCO is running the outplacement program as part of its effort to provide systematic support to employees in preparing for the "second phase of life" after retirement. In 2008, 305 prospective retirees participated in 26 courses under 7 outplacement programs, including change management, asset management, start-up preparation, and IT education.

In addition, KEPCO joined a retirement insurance plan with the consent of both labor and management. Labor and management of KEPCO are working together to convert the current retirement benefit payment scheme, in which the benefit is paid out in lump sum, to a retirement pension scheme through consultations and seminars.

# Lifelong Learning Program

As declaring itself to be a lifelong learning company, KEPCO attended the board meeting and the general congress of the Lifelong Learning Club held in October and November 2007, respectively, as part of an effort to create a learning atmosphere across the company and consolidate its corporate image as an innovation leader. In 2008 alone, KEPCO provided training to 68,690 employees through a total of 518 training courses, including 289 offered by the Central Education Institute and 229 provided by external training organizations(outsourcing).



# Practicing Safety and Health Management Respectful of Human Life

Pursuant to the Industrial Safety and Health Act, KEPCO has formed "Industrial Safety and Health Committee" consisting of 10 members from labor and management to carry out safety activities based on the requirements of the field. The Committee plays an important role in KEPCO's effort to achieve a zero accident rate and promote health of its employees. KEPCO is also striving to ensure reliable operation of electric power facilities so that industrial accidents are can be prevented in advance, minimizing the accident rate and work loss. We have developed a policy concerning health and safety, and established SSM [Systematic Safety Management] system based on the OHSAS 18001 standard for safety management planning, early elimination of potential risk factors, and real-time safety diagnosis and assessment. In addition, near-miss cases are shared across the company.

Furthermore, we are assessing the safety management efforts of our employees and suppliers on a regular basis through the BSC system, which is our strategic assessment system, and the assessment results are reported to the top management. In 2008, 1 employee (3 employees in 2007) was injured in work-related accidents, and there was no occupational disease reported.

# Mutually Beneficial Labor-Management Relationship

Each year, KEPCO convenes 4 times of the Labor-Management Council participated by a total of 16 members [8 from each, respectively], along with various consultation bodies between labor-management including wage and collective bargaining [8 from each, determining working conditions through negotiations], Industrial Safety and Health Committee [10 from each, improving employees' health], KEPCO internal fund council [4 from each, decision-making on major welfare programs].

KEPCO complies with ILO conventions concerning freedom of association, the right to organize and collective bargaining (ILO convention no. 87, 98). Labor and management at KEPCO pursue a forward-looking, mutually beneficial labor relationship through dialogue and cooperation with the recognition that the two parties work as partners in running the company based on mutual trust.

# KEPCO's strategies and action items to improve labor - management relations

| Strategy   | Action  | items   |
|--|---|---|
| Respond to the changing labor market environment | Introduce a policy on the essential minimum<br>services to be maintained during strike     Form conditions necessary for the financial<br>independence of the labor union | Prepare for multiple/industrial trade<br>union system     Examine the labor-management relation<br>ship and feedback  |
| Mutual trust and respect                         | ·Improve the operation of the labor-<br>management council<br>·Jointly implement the labor-management<br>conciliation program   | Facilitate communications Social contribution activities jointly participated by labor and management   |
| Participation & cooperation                      | Enhance the partnership in addressing<br>pending issues     Make collaborative efforts to improve<br>productivity   | Employ a realistic approach to manage the<br>labor-management relationship considering<br>the requirements of work sites.     Promote labor-management collaboration<br>at a site level |
| Rational L-M relation<br>management              | Systematic approach to address the<br>causes of conflicts     Improve expertise in labor-management<br>relation management  | Employ a collective/integrated approach<br>to labor-management relationship at the<br>Group level     Conclude a collective agreement through a<br>reasonable process                   |

# Efforts to ensure health and safety of employees

# Safety

Created sound and safe working environment : regularly monitor and improve working conditions such as noise level monitoring

 $Health\,promotion: general\,(annual)\,\&\,special\,(bi-annual)\,check-ups$ 

Support for the ill: grant sick leaves for medical care

Operation of a medical foundation : 40% discount on medical bill, electric burn treatment, etc.

Insurance support: statutory health insurance, industrial accident insurance, group insurance

\* Improvement in 2008: employees visit medical clinics in local community for check-up, etc.

### Health

Re-established safety device classification methods and revised the related standards (2008)

Pursued international standardization of safety devices and equipment :  $35 \, \text{items}$ 

Online real-time management of safety control planning, operation, evaluation and improvement, etc.

Reasonable compensation : compensation for industrial injuries, in-house compensation, compensation from the Electric Power Contribution Fund

Implemented the accident forecasting program and prevention activities tailored to accident types

Declared an industrial safety and heath campaign season to intensively promote industrial safety and health through collaboration between labor and management

# ■ Accident rate





# ■ Efforts to improve labor-management relations in 2008

# · Strike-free signing of collective agreement for 62 years since

Advance labor relations

- the formation of the labor union

   Staged negotiation: individual negotiation → working-level negotiation → main negotiation
- · Concluded an agreement on maintaining of the essential minimum services during strikes, through voluntary consultations between labor and management
- Mapped out basic strategies regarding permission of multiple union system and prohibition of the wage payment to full-time union staffs

# Expand participation and cooperation

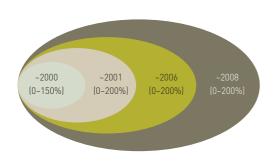
- · Operate the Labor-Management Council through ex ante consultations to make it easier to reach agreement on issues
- · Launch 'Labor-Management Joint Campaign' : joint effort for mind innovation
- Encourage suggestions to collect ideas from employees [4,182 suggestions]
- Operate a Joint T/F to address issues : improve the personnel system, etc.
- · Innovation roundtables at each site : participated by 4,348 persons at 43 sites

# Build mutual trust

- · Direct communication between CEO and labor union.
- Round table discussion on urgent managerial issues (4 times), CEO's site visits and roundtables (13 times, 2,760 persons), etc.
- · Held a labor-management joint discussion session to overcome challenges facing the company management
- 52 from the company including CEO(Top management), and 87 from the labor union including the union leader
- Wage returns by all employees (KRW 29.2 billion), austerity management (KRW1.2 trillion saved )

# Cultivating Global Talents

# Phased expansion of the yearly salary scheme



Grade1~3 150% Grade4 or lower 80% Grade1(A/B) 200% Grade2~3 150% Grade 4 or lower 80%

Grade1(A) 200% Grade1(B)~3 150% Grade 4 or lower 80%

Grade1(A/B) 200% Grade2~3 150% Grade 4 or lower 100%

# Average yearly salary paid out in 2008

| Rank                            | Position             | Average<br>annual salary<br>(KRW 1,000) | Merit pay (%) |
|---------------------------------|----------------------|---|---------------|
|                                 | CEO                  | 330,296                                 | 62.6          |
|                                 | Standing<br>director | 204,342                                 | 48.0          |
| General employees ( Grades 1~6) |                      | 64,267                                  | 25.6          |

# Personnel Management Based on Merit and Performance

Expand performance-based compensation

BSC-based evaluation Performance-based pay Yearly salary by contract Compensation/promotion linked to performance Enhance the linkage between merit/performance and personnel policy

Introduce and implement open competition approach to determine position rotations

Separate positions from titles

Operate a refreshment program for those who failed in job positioning competition
Rotation between administrative/technical positions

In 2007, moving away from a seniority-based wage system, KEPCO began applying a performance-based yearly salary scheme to all employees. The tiered basic wage system, which is another means with which to ensure performance-based compensation, had been applied only to Grade 1 employees, but was expanded to cover Grade 3 employees as well. Meanwhile, in an attempt to be prepared against the challenges posed by demographic changes brought by the aging population and low birth rates, we are searching for ways to introduce a wage peak scheme in which the retirement age is extended.

In 2008, we introduced the open competition job positioning system and all employees who currently held positions were re-assigned to a total of 4,618 positions through open competition. As a result, vitality was brought in to the corporate atmosphere and our organizational culture became more dynamic. Moreover, we introduced a new evaluation system based on MBO (Management By Objective) in an effort to ensure that personnel management having alignment with strategies will take root at KEPCO.

We will endeavor to establish an innovative personnel management system which induces competition among employees for better performance and competence by taking various measures such as expanding rotations between technical positions and administrative positions.

# **Career Development**

KEPCO has laid out a roadmap for fostering talents for the future, according to which we categorize our employees into global talent pool and ordinary manpower based on the company's strategic choice and an employee's personal preference.

In 2008, we spent KRW 51 billion (0.16% of the revenues) in education and training. Per capita annual training hours totaled 92.8 hours, up 5 hours from 2007.

# Fostering Qualified Human Resources in Growth Engine Areas

In an effort to build up the capabilities to develop new business comparable to global leading companies and to secure specialists for success of business in advance, we are operating a human resources pool in green growth areas and running a specialized program to cultivate specialists based on the pool. We will conduct job competence modeling for establishing a core talent management system, and select key positions to run a succession plan for core talents. With these plans and annual salary scheme that directly links performance to compensation in place, qualified employees will be able to climb up the corporate ladder faster than underperformers and fairly compensated for their high performances.

# Statistics on education and training

| Classification                                  | 2006 | 2007 | 2008 |
|---|------|------|------|
| Training expenses (as % of sales)               | 0.16 | 0.18 | 0.16 |
| Per capita training expenses (KRW10,000/person) | 220  | 242  | 242  |
| Annual training hours<br>(Hours/person)         | 86.7 | 87.7 | 92.8 |

# Strategic approach to cultivate talents

| Classification                     | Description  |
|------------------------------------|--|
| Foster global specialists          | Build up a pool of overseas business specialists to facilitate overseas business     Prepare curriculums that link current jobs to long-term education courses     Nurture regional experts in connection with overseas business.  |
| Develop and enhance job competence | Improve in-house educational curriculum focusing on required skills and needs  Set up a leadership pipeline education program to develop employees' competence  Operate an in-house college focused on field requirements and field learning  Expand specific job training through promotion of e-learning |

# Respect for Human Rights and Diversity

# **Gender Equality**

As a company committed to promoting gender equality, KEPCO is taking various measures to support female employees, such as eliminating discrimination against women in hiring and promotion, providing counseling, and strengthening motherhood protection.

In 2008, female employees accounted for 25% of the total number of newly hired employees, exceeding our selfimposed female employment quota of 20% (based on the number of currently employed). The number of female employees who were promoted to middle level managerial posts continuously increased from 7 as of 2000 to 44 in 2007 and 61 in 2008. Moreover, we are strictly complying with ILO convention no. 100 concerning equal remuneration for men and women workers for work of equal value by paying equal remunerations to male and

# Giving Job Opportunity to the Underprivileged

As of 2008, KEPCO has 482 employees with disability, and the share of the disabled stands at 2.3%, which exceeds the 2% legal quota under the Disabled Persons Employment Promotion and Vocational Training Act. Over the entire course of employment process, persons with disability are given 5% of their total score as bonus points. Besides, since 2007, we have been running a social equity employment program targeting people from low income families.

# **Protecting Motherhood**

As part of an effort to deal with growing concerns over low birth rates and aging workers, KEPCO is searching for ways to encourage female employees to have children. Female employees at KEPCO are granted maternity leaves around the time of their delivery, which are tallied into the period of their continued employment and career so that women are not discriminated against in the evaluation for promotion. To promote maternity leaves (75 persons in 2008) and pre-or post-delivery leaves, KEPCO actively supports the use of replacement workforce and has prepared a separate space for maternity protection and a childcare facility (capacity: 60 children) at the head office in order to help our employees to strike a work-life balance.

# Rooting Out Discrimination

Chapter 5 of our Code of Ethics titled "Employee Ethics" stipulates that no person will be discriminated against on the grounds of sex, academic background, religion, age and disability. This represents our compliance with ILO convention No. 111 concerning discrimination in respect of employment and occupation. We are also strictly complying with the human rights standards of the 10 Principles of the Global Compact.

Furthermore, to ensure more active engagement of our suppliers in our efforts to promote human rights of employees of our suppliers, we underwent human rights screening as to 13% of our suppliers (giving additional points in credibility to 789 cases out of the total 6,289 cases)

# Hiring Science and Engineering Majors & Turning Non-Regular Workers into Regular Workers

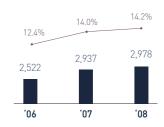
In an attempt to secure talents in science and engineering, which is one of the least preferred majors in Korea, KEPCO hired science and engineering majors up to 67%(403) in 2007 and 70%(253) in 2008 of the total number of new employees. To address the issues concerning non-regular workforce, KEPCO changed the status of 475 non-regular workers to regular employment, and had the rules and policy regarding nonregular worker hiring clarified.

# Prevention of Forced Labor and Child Labor

KEPCO is strictly complying with the Labor Standard Act of Korea, ILO convention (No. 105 concerning the abolition of forced labor) and the labor standards of the 10 Principles of the Global Compact.

# Share of female employees

# (Unit: No. of person)



# Efforts to improve gender equality

### Counseling for female workers & training on the prevention of sexual harassment

Enacted and operated the sexual harassment prevention quidelines (since Jul. 1999)

Female employee management system: including opening of a website for sexual harassment report (Sep. 2007)

Sexual harassment counselors at every site (1 man and 1 woman) and one compulsory education session (2005~):

- No. of employees who attended the education session: 952
- No, of trained counselors: 506

Random on-site inspection (16 sites) and video education Power EQ survey on sexual discrimination (2008)

# Eliminating discrimination in hiring and promotion

Overachieved female employment quota (20%) for 6 consecutive years

 $\times 22\%(2006) \rightarrow 21\%(2007) \rightarrow 25\%(2008)$ 

Continuous increase in the number of female employees promoted to managerial positions

# Non-regular worker protection system



was introduced

management system regular worker management was enacted

Non-regular worker The Guidelines for non- Protection of non-regular workers was stipulated in the collective agreement

KEPCO established a comprehensive personnel management system designed to protect non-regular workers for the first time in the public sector.

# Third Party Review



# Prior suggestions

- Overcoming global economic crisis by adjusting electricity tariffs upwardly to a sensible level
- •Take the lead in realizing low-carbon green growth by reducing carbon emissions
- ·Nurture the Smart Grid Project as a growth engine



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This year's sustainability report was reviewed in accordance with the assurance guidelines of the AA1000AS –materiality principle, completeness principle, and responsiveness principle. This report consisting of 4 sections including Green Light for Economic Value, Eco Energy for Environment, Synergetic Society, and Creative Life and Human is deemed a skillfully organized and balanced report that contains all requirements in an objective manner.

Given the stated purposes and contents of 2009 sustainability report, it appeared that KEPCO made utmost effort to pursue sustainability management within the regulatory boundaries of a public entity. However, what our nation and people expect of KEPCO might be more than that. This is because, all of us in Korea hope a better tomorrow and desire to see our next generations lead a better life in a more affluent country, and electricity, the main energy source of people's life and industries, is at the center of the future we dream of.

Among the requirements for Korea to become an advanced country, those directly related to electricity industry are first, nurture low-carbon industry as a growth engine, second, efficiently pursue the smart grid, and lastly, ensure energy independence through resources development abroad.

To nurture low-carbon industry as a growth engine, the existing new & renewable energy industry such as photovoltaic, wind and bioenergy have a great share of contribution to make. Given the reality facing the nation – we absolutely lag behind in terms of R&D budget, solar radiation, wind direction, available land, we should focus on commercialization of low-carbon power generation technology, an area in which Korea has an advantage. As for the Smart Grid project currently pursued at the national level, there are great expectation of it as it is deemed to have great potential to become ICT-led industry and future export industry. To ensure the success of smart grid project, first of all, tariffs difference between peak time and non-peak time must be clearly delivered to consumers by GENCOs. However, at present, 5 GENCOs that are running gas, gasoline, coal power plants simultaneously cannot send varied tariff signals to consumers. Furthermore, it was unnecessary competition amongst 5 GENCOs, which were reluctant to develop/import overseas resources, that eventually caused a prolonged crude oil price hike. The 2address due to separated structures of 5 GENCOs.

KEPCO should always have in mind that it is not an ordinary profit-seeking electricity supplier and rather it has a mandate to secure reliable supply of energy for the nation in the future. I hope that KEPCO will take a more proactive attitude facing its noble mission, spearheading effort s to realize energy independence of Korea and serving as a driving force behind the nation's economic growth.

October 2009



Prior suggestions

- •Strengthen KEPCO's role regarding green industry as a new growth engine
- Improve the general public's consensus on the rationale of KEPCO's sustainability management
- •Enhance investment activities in research and development as a leading energy group

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# Remarkable presentation of vision and mid-to long-term strategic management plans

First of all, it draws attention that Global Top 5 Utility for Green Energy is declared as KEPCO's corporate vision for 2020. Half of the 10 mid-to-long-term strategic objectives that KEPCO drew up accordingly are directly related to green energy, which demonstrates the company's effort to link its vision with specific objectives. In particular, it is deemed that the company has set a right direction to take in its pursuit of the vision in that it focuses on investment in green energy technology.

### Skillful organization of contents that improves credibility

Many improvements are found in this year's report in several aspects; 2020 mid-to long-term strategic management plans are presented with specific targets, and the key economic performances are shown with YOY comparison, to make it easy to understand. The internal control system for global standards were further strengthened compared with last year, and efforts to improve labor-management relations were enhanced. Most highly appreciated are more detailed explanation of the company's operation system that has made it possible for the company to make progress in pursuing sustainability management. That is because, achievements not based on system can be hugely affected by external factors each year.

# Need to warn of green bubble and emphasize the rationale behind the sustainable growth initiative

It was very appropriate to emphasize green industry as a new growth engine. However, it is also essential for KEPCO to make effort to ease concerns over green bubbles often raised by some quarters. Furthermore, the company needs to place more emphasis on efforts to enhance public awareness on the rationale behind its sustainable growth. That is particularly important considering that KEPCO needs to build a public consensus on electricity tariff increase in the wake of last year's first deficit in its history.

# Insufficient explanation of 8 key green technology selection procedures

It was a good point to make that KEPCO is leading R&D investment in key areas for sustainable growth. However, what is to be still desired is a more persuasive explanation of the thorough deliberations that KEPCO had done to select these 8 key areas. I deeply appreciate the company's effort to faithfully incorporate the advisors' suggestions delivered beforehand in this report.

# Need to step up effort to disseminate sustainability management outside the company

KEPCO needs to exert more effort to disseminate the knowledge and experiences it has accumulated with respect to sustainability management to other organizations. It is because as a leading public enterprise, KEPCO is deemed to have social responsibilities to create and disseminate best practices, thereby allowing other organizations to follow suit.

October 2009



- Emphasize the importance of anti-corruption and ethical management in the time of economic crisis.
- ·Substantial engagement beyond introduction of sustainability management system and policy.
- •Thoroughly evaluate the achievements and limitations regarding sustainability management, and draw up future initiatives.



# Ethical management built on moral ground

For about 1 year since the publication of 2008 sustainability report, most people in society as well as a great number of companies suffered a serious crisis of their life and existence under the torturous influence of global financial crisis. The financial crisis facing us today is not totally attributed to economic failure or malfunction; rather, much of it has stemmed from lack of sound philosophy and the weakened moral ground. Blindly seeking profit myopically while disregarding universal standards of ethics and morality is tantamount to corruption in a broad context. In a social atmosphere where unethical management practices are rampant, KEPCO's interest in ethical management and subsequent efforts to put it into practice as revealed in this report clearly exemplifies what is required for a company to become a truly "respected company".

# Moves one step towards integrity from anti-corruption

It is noticeable that KEPCO ranked top in the survey on the integrity of public enterprises conducted by the Anti-Corruption and Civil Rights Commissions for several consecutive years. However, it should be noted that rooting out corruption and irregularities at superficial level such as bribery and expensive dinner/entertainment offering is only a necessary condition. Substantial action plans for ethical management are to seek universal values concerning human rights, labor, environment, and to fulfill social responsibilities simultaneously. This report adequately describes interest and concerns that KEPCO has in its efforts to practice the value of integrity across all areas including social and environment, going beyond anti-corruption efforts.

# From institution and codes to engagement and practice

It is a huge mistake to think that introduction of institution or codes is sufficient to succeed in ethical management. On the other hand, ethical management cannot be sustained without significant achievement in innovation, technology development, management strategies. In this context, it can be said that a true ethical management begins with the consensus on and engagement in integrity based on moral ground of all participants including suppliers and commitment to put it into practice.

# Become a leader of ethical management but stay humble

If there is any weak point in this report, that may be insufficient comments on weakness of KEPCO's ethical management or the company's serious concern about it. I look forward to seeing KEPCO having confidence in its accomplishment while humbly accepting its limitations and mistakes. Such self-reflection will lead to stronger commitment and actions by all stakeholders, which are requirements for KEPCO to becoming a role model of global energy company.

October 2009

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Chairperson, Transparency International-Korea(Present)

# GRI Index



# **GRI Index**

# Profile

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| EC5           | Ratios of standard entry level wage compared to local minimum wage at significant locations of operation                             | 57    |  |
| EC6           | Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation                       | 45,47 |  |
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| EN3           | Direct energy consumption by primary source  | 34        |
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| EN10          | Percentage and total volume of water recycled and reused   | 34        |
| EN11          | Size of land owned, leased, managed in, or adjacent to, protected areas and areas of high diversity value  | 38        |
| EN12          | Significant impacts of activities, products, and services on biodiversity in protected areas and areas of high diversity value                                     | 38        |
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| EN16          | Total direct and indirect greenhouse gas emissions by weight   | 37,41     |
| EN17          | Other relevant indirect greenhouse gas emissions by weight   | 37,41     |
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# Social -Human Rights

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| LA2           | Total number and rate of employee turnover   | 54   |
| LA3           | Benefits provided to full-time employees   | 54   |
| LA4           | Percentage of employees covered by collective bargaining agreements  | 55   |
| LA5           | Minimum notice period(s) regarding significant operational changes (specified in collective agreement (Y/NJ)   | 55   |
| LA6           | Percentage of total workforce represented in formal joint management-worker health and safety committees   | 55   |
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| HR2           | Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken  | 45   |
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| S01           | Programs that assess and manage the impacts of operations on communities  | 44-46 |
| S02           | Percentage and total number of business units analyzed for risks related to corruption                                      | 44    |
| S03           | Percentage of employees trained in organization's anti-corruption policies and procedures                                   | 44    |
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|               | their outcomes  | 48    |
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| PR4           | Total number of non-compliance with laws and regulations regarding products and service labeling                                  | 46       |
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| PR6           | Policies and programs related to marketing communications, including advertising, promotion and sponsorship                       | 46       |
| PR7           | Total number of incidents of non-compliance concerning marketing communications, including advertising, promotion and sponsorship | 46       |
| PR8           | Total number of substantiated complaints regarding breaches of customer information protection                                    | 45-46    |
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| Economy         | Business growth  |       |
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|                 | Management innovations   | 28    |
|                 | Operating structure of R&D   | 25    |
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# Appendix



# Code of Ethics

Enacted in Feb.1996 Revised 1<sup>st</sup> in Dec. 2003 Revised 2<sup>nd</sup> in Jan. 2005

KEPCO is proud that it has contributed to the development of national economy and society by providing the best service and the quality electric power to all customers.

Based on the pride and self-confidence, we will make KEPCO a global power company that grows and develops with all stakeholders of the company by pursuing the core values, the "Management based on Customer Respect" which gives priority to customers, the "Changes Oriented Management" which pursues innovations, and the "Profit Centered Management" which represents the wholesome profits.

In order to realize our goals, we recognizes that the establishment of fair and transparent culture of ethics is essential, and we establish the Code of Ethics based on the standards of upright actions and evaluation that all employees of the company shall abide by and pledge to practice the codes.

- 1. We will share the core values and visions of the company, accomplish our mission with challenging and progressive minds, abide by concerned regulations while maintaining high ethical values, and carry out given jobs fairly and sincerely.
- 1. We will provide the best quality electricity and service, practice customer respect, and pursue mutual prosperity with customers.
- 1. We will realize wholesome profit making through innovative management activities and take the lead for sustainable growth and development.
- 1. We will respect the personalities of employees, give the equal opportunities, create safe and pleasant work environment, and make efforts so that employees can feel the pride of their company.
- 1. We will abide by related laws and regulations and international conventions concerned, protect the environment, and participate in activities for public interests in full scale to make contributions to the development of the nation and the society.

# Chapter 1 General rules

This Code of Ethics gives the standard for evaluation and wholesome activities that employees of KEPCO shall abide by in order to create fair and transparent culture of ethics. All employees of KEPCO shall fully understand and observe the Code of Ethics.

# Chapter 2 Basic ethics for KEPCO people

- 1. Share the core values and visions of the company, fulfill given jobs, pursue the development of the individuals and the company through continuous self-development.
- 2. Process given jobs fairly and sincerely by observing related laws and regulations based on high ethical values, do not take excessive profits, and try to maintain individual dignity and the company's honor.
- 3. Realize the fact that both labor and management are the owners of the company and take the lead for the coexistence and shared prosperity of labor and management based on trust and cooperation.

# Chapter 3 Ethics for customers and suppliers

- 1. With the spirit of customer respect, take all customer's values as the primary standards of all activities to provide the highest quality electric power and service to customer's satisfaction to secure trust from the customer
- 2. Respect the order of market economy referring to the principle of free competition and stately pursue well-intended competition with competitors based on mutual respect
- 3. Give equal opportunities to the suppliers, process the job fairly in the equal position, and pursue common development with suppliers through various supports.

# Chapter 4 Ethics for shareholders and investors

- 1. Gain wholesome profits through efficient management activities and transparent work process to protect the investment profit of the shareholders and investors.
- 2. Uplift corporate value based on continuous changes and innovations to pursue wholesome growth and development of the company in a long term.
- 3. Disclose and provide corporate information transparently, expand the opportunities for shareholders and investors to participate in management decision making process including the corporate policies to support them in executing their rights as shareholders and investors.

# Chapter 5 Ethics for employees

- 1. Treat each and every employee as dignified personalities, provide the equal opportunities according to the individual's competence and disposition, and do not discriminate or give preferential treatment due to gender / level of education / religion / age / physical handicaps.
- 2. Support the development of each individual in full scale to cultivate them into the competitive talent that company needs and create the environment to promote creative autonomous thoughts and actions
- 3. Create pleasant and safe work environment and make continuous efforts so that employees can develop the pride for the company based on mutual trust and understanding.

# Chapter 6 Ethics for nation and society

- 1. Contribute to the national and social development based on continuous growth and development through rational and responsible management, and fulfill social responsibilities as a member of local community.
- 2. Establish safety culture that gives priority to the safety of customers and employees based on the concept of respecting human life and dignity, observe domestic and international related laws and regulations by recognizing the importance of environmental issue, and make efforts to protect the environment and prevent contamination.
- 3. Observe domestic and international laws and regulations as well as international conventions in management activities, respect the culture of the country where the overseas business was operated, and contribute to the economic development of the corresponding countries.

# **Balance Sheet**

The 48<sup>th</sup> period As of Dec. 31, 2008 The 47<sup>th</sup> period As of Dec. 31, 2007

(Unit : KRW mil.)

| Description                                     | Current (48 <sup>th</sup> period) | Previous (47 <sup>th</sup> period) |
|---|-----------------------------------|------------------------------------|
| I .Current assets                               | 4,230,413                         | 3,689,653                          |
| II .Non-current assets                          | 62,637,763                        | 61,952,938                         |
| Total assets                                    | 66,868,176                        | 65,642,591                         |
| Current liabilities                             | 7,875,532                         | 6,983,873                          |
| II .Non-current liabilities                     | 18,053,705                        | 14,627,986                         |
| Total liabilities                               | 25,929,237                        | 21,611,859                         |
| I .Capital stock                                | 3,207,839                         | 3,207,839                          |
| II .Capital surplus                             | 14,556,185                        | 14,555,890                         |
| III .Capital adjustments                        | Δ 741,489                         | Δ 741,825                          |
| IV.Accumulated other comprehensive income(loss) | 406,672                           | 79,664                             |
| V.Retained earnings                             | 23,509,732                        | 26,929,164                         |
| Total shareholders' equity                      | 44,030,732                        | 44,030,732                         |
| Total shareholders' equity and liabilities      | 66,868,176                        | 65,642,591                         |

# **Income Statement**

The 48<sup>th</sup> period Jan. 1 ~ Dec. 31, 2008 The 47<sup>th</sup> period Jan. 1 ~ Dec. 31, 2007

(Unit : KRW mil.)

|                                 |                                   | (01110.11110.11                    |
|---------------------------------|-----------------------------------|------------------------------------|
| Description                     | Current (48 <sup>th</sup> period) | Previous (47 <sup>th</sup> period) |
| l .Revenues                     | 31,522,383                        | 28,983,885                         |
| II .Cost of sales               | 33,871,725                        | 27,413,295                         |
| III .Gross profit               | Δ 2,349,342                       | 1,570,590                          |
| IV.SG&A                         | 1,309,860                         | 1,240,590                          |
| V.Operating income              | Δ 3,659,202                       | 330,000                            |
| VI.Non-operating income         | 1,547,868                         | 2,338,416                          |
| VII.Non-operating expenses      | 2,394,897                         | 784,641                            |
| VIII.Income before income taxes | Δ 4,506,231                       | 1,883,775                          |
| IX.Income tax expenses          | Δ 1,553,763                       | 326,960                            |
| X.Current net income            | Δ 2,952,468                       | 1,556,815                          |

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### **Cash Flow Statement**

The  $48^{th}$  period Jan. 1 ~ Dec. 31, 2008 The  $47^{th}$  period Jan. 1 ~ Dec. 31, 2007

(Unit : KRW mil.)

| Description   | Current (48 <sup>th</sup> period) | Previous (47 <sup>th</sup> period) |
|---|-----------------------------------|------------------------------------|
| .Cash flow from operating activities                | 141,515                           | 2,548,927                          |
| 1. Net income                                       | Δ 2,952,468                       | 1,556,815                          |
| 2. Addition of expenses not involving cash outflows | 4,063,888                         | 2,550,470                          |
| 3. Deduction of revenues not involving cash inflows | Δ1,110,840                        | Δ 2,007,562                        |
| 4. Changes in operating assets and liabilities      | 140,936                           | 449,203                            |
| .Cash flow from investing activities                | Δ 3,466,534                       | Δ 2,669,837                        |
| 1. Cash inflow from investing activities            | 1,207,675                         | 1,846,592                          |
| 2. Cash outflow from investing activities           | Δ 4,674,209                       | Δ 4,516,429                        |
| $\   $ .Cash flow from financial activities         | 3,354,894                         | 181,032                            |
| 1. Cash inflow from financial activities            | 7,492,901                         | 4,171,657                          |
| 2. Cash outflow from financial activities           | Δ 4,138,007                       | Δ 3,990,625                        |
| V .Net increase (decrease) in cash [   +    +     ] | 29,876                            | 60,122                             |
| $\lor$ .Cash at the beginning of the year           | 189,346                           | 129,225                            |
| VI.Cash at the end of the year                      | 219,222                           | 189,346                            |

## Statement of Disposition of Deficit

The  $48^{th}$  period Jan. 1 ~ Dec. 31, 2008 (Date of appropriation: Mar. 20, 2009) The  $47^{th}$  period Jan. 1 ~ Dec. 31, 2007 (Date of appropriation: Feb. 29, 2008)

(Unit : KRW mil.)

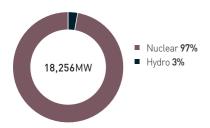
| Description  | Current (48 <sup>th</sup> period) | Previous (47 <sup>th</sup> period) |
|--|-----------------------------------|------------------------------------|
| Accumulated deficit before disposition                                   | Δ 2,952,468                       | 1,556,815                          |
| 1. Net profit (loss)   | Δ 2,952,468                       | 1,556,815                          |
| .Disposition   | 2,952,468                         | -                                  |
| 1. Transfer from voluntary reserves                                      | 2,952,468                         | -                                  |
| III .Appropriation of retained earnings                                  | -                                 | 1,556,815                          |
| 1. Dividends   | -                                 | 466,964                            |
| 2. Voluntary reserve   | -                                 | 1,089,851                          |
| IV .Undisposed accumulated deficit to be carried over to subsequent year | -                                 | -                                  |

## Environmental Data of GENCOs













### Korea Hydro and Nuclear Power

Capacity: 18,254MW Production: 152,255GWh Sales: KRW 5.8024 tril. Employees: 7,515

#### Korea South-East Power

Capacity: 8,941MW Production: 51,372GWh Sales: KRW 3,0434 tril, Employees: 2,012

### Korea Midland Power

Capacity: 9,505MW Production: 42,976GWh Sales: KRW 3,5898 tril. Employees: 2,268

| Sales : NIW 5,0024 till. Limptoyees : 7,515 |                       |        | Sales: NIVV 3,0434 till. Employees: 2,012 |        |  | Sales : MW 5.3076 tht, Employees : 2,206 |        |        |        |  |                       |        |        |        |
|---|-----------------------|--------|---|--------|--|--|--------|--------|--------|--|-----------------------|--------|--------|--------|
| Class                                       | ification             | 2006   | 2007                                      | 2008   | Class                                  | ification                                | 2006   | 2007   | 2008   | Class                                  | ification             | 2006   | 2007   | 2008   |
| Water use(                                  | 1,000t)               | 3,090  | 3,209                                     | 3,138  | Water use(1                            | ,000t)                                   | 6,647  | 6,388  | 8,306  | Water use(1                            | ,000t)                | 4,793  | 5,287  | 6,157  |
| Greenhouse<br>(CO <sub>2</sub> 1,000t)      | gas emission          | -      | -   | -      | Greenhouse<br>(CO <sub>2</sub> 1,000t) | gas emission                             | 35,731 | 37,058 | 43,620 | Greenhouse<br>(CO <sub>2</sub> 1,000t) | gas emission          | 26,658 | 27,893 | 32,337 |
| Air   | SOx(t)                | -      | -   | -      | Air                                    | SOx(t)                                   | 17,301 | 14,765 | 13,095 | Air                                    | SOx(t)                | 17,194 | 16,784 | 19,993 |
| pollutants                                  | NOx(t)                | -      | -   | -      | pollutants                             | NOx(t)                                   | 38,086 | 36,666 | 35,153 | pollutants                             | NOx(t)                | 24,497 | 24,433 | 26,874 |
|   | Dust(t)               | -      | -   | -      |  | Dust(t)                                  | 821    | 838    | 970    |  | Dust(t)               | 638    | 757    | 890    |
| Discharged                                  | COD(kg)               | 39,400 | 28,040                                    | 16,277 | Discharged                             | COD(kg)                                  | 2,708  | 1,879  | 1,279  | Discharged                             | COD(kg)               | 872    | 889    | 1,158  |
| water                                       | SS(kg)                | 9,400  | 4,546                                     | 8,136  | water                                  | SS(kg)                                   | 2,240  | 1,073  | 690    | water                                  | SS(kg)                | 453    | 452    | 613    |
| Coal ash                                    | Generated<br>(1,000t) | -      | -   | -      | Coal ash                               | Generated<br>(1,000t)                    | 1,999  | 2,032  | 1,902  | Coal ash                               | Generated<br>(1,000t) | 1,117  | 1,029  | 1,309  |
|   | Recycled(%)           | -      | -   | -      |  | Recycled(%)                              | 73     | 85     | 72     | Recycled(%)                            | Recycled(%)           | 56     | 65     | 70     |

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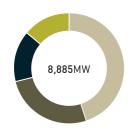
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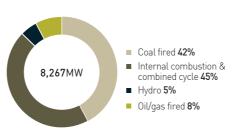








- Coal fired 45%
- Internal combustion & combined cycle 26%
- Hydro **15%**
- Oil/gas fired 14%





- Coal fired 52%
- Internal combustion & combined cycle 22%
- Hydro **7**%
- Oil/gas fired 19%

## Korea Western Power

Capacity: 8,885MW Production: 46,955GWh Sales: KRW 3,7003 tril. Employees: 1,881

| Classification                         |                       | 2006   | 2007   | 2008   |   |
|--|-----------------------|--------|--------|--------|---|
| Water use(                             | I,000t)               | 5,838  | 6,002  | 6441   |   |
| Greenhouse<br>(CO <sub>2</sub> 1,000t) | gas emission          | 27,353 | 34,334 | 33,441 |   |
| Air<br>pollutants                      | SOx(t)                | 10,877 | 15,431 | 12,372 |   |
|  | NOx(t)                | 25,673 | 14,401 | 18,590 |   |
|  | Dust(t)               | 1,052  | 976    | 797    |   |
| Discharged<br>water                    | COD(kg)               | 1,992  | 1,928  | 1,920  |   |
|  | SS(kg)                | 1,430  | 1,473  | 1,565  | , |
| Coal ash                               | Generated<br>(1,000t) | 904    | 1,059  | 1,311  |   |
|  | Recycled(%)           | 69     | 67     | 68     |   |

## Korea Southern Power

Capacity: 8,267MW Production: 50,588GWh Sales: KRW 4.6149 tril. Employees: 1,936

| Classification                         |                       | 2006   | 2007   | 2008   |                          |
|--|-----------------------|--------|--------|--------|--------------------------|
| Water use(1                            | ,000t)                | 4,862  | 5,096  | 5,487  | Wate                     |
| Greenhouse<br>(CO <sub>2</sub> 1,000t) | gas emission          | 30,646 | 32,891 | 30,720 | Gree<br>(CO <sub>2</sub> |
| Air                                    | SOx(t)                | 5,968  | 6,959  | 7,874  | Air                      |
| pollutants                             | NOx(t)                | 16,238 | 12,023 | 12,755 | pollu                    |
|  | Dust(t)               | 249    | 455    | 417    |                          |
| Discharged                             | COD(kg)               | 2,166  | 1,681  | 2,022  | Disch                    |
| water                                  | SS(kg)                | 940    | 885    | 745    | wate                     |
| Coal ash                               | Generated<br>(1,000t) | 892    | 831    | 956    | Coal                     |
|  | Recycled(%)           | 64     | 57     | 50     |                          |

## Korea East-West Power

Capacity: 9,501MW Production: 50,612GWh
Sales: KRW 3.996 tril. Employees: 2,118

| Class                                  | ification  | 2006   | 2007   | 2008   |
|--|--|--------|--------|--------|
| Water use(                             | 1,000t)  | 8,217  | 9,688  | 8,725  |
| Greenhouse<br>(CO <sub>2</sub> 1,000t) | Greenhouse gas emission (CO <sub>2</sub> 1,000t) |        | 35,575 | 38,693 |
| – Air                                  | SOx(t)   | 15,976 | 17,215 | 17,394 |
| pollutants                             | NOx(t)   | 27,585 | 26,483 | 28,282 |
|  | Dust(t)  | 667    | 569    | 700    |
| Discharged                             | COD(kg)  | 14,222 | 10,755 | 12,231 |
| water                                  | SS(kg)   | 5,432  | 6,488  | 4,466  |
| Coal ash                               | Generated<br>(1,000t)                            | 1,486  | 1,654  | 2,133  |
|  | Recycled(%)                                      | 68     | 71     | 69     |

# National Power Grid Map



- 765kV Substation
- 345kV Substation
- Power Plant
- 765kV route
- 345kV route
- ···· 345kV Underground route
- :::: DC±180kV Cable Link

KEPCO will make the world a brighter and more beautiful place.





#### Global Compact

UN Secretary-General Kofi Annan presented the ten 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 Impact aimed at promoting business transparency and corporate social responsibility. The operational phase of the initiative was launched at UN Headquarters in July 2000.

#### GRI (Global Reporting Initiative)

A UNEP (United National Environmental Programme) body in charge of developing globally applicable guidelines for sustainability reporting.

#### Kyoto Protocol

This is the substantial implementation plan of the Convention on Climate Change, the international convention established to prevent and regulate global warming, and it specified the target of greenhouse gas reduction in advanced nations. This protocol was adopted at the 3rd General Meeting of concerned countries held in Kyoto, Japan, in December 1997. Currently, Korea is excluded from the countries required to reduce greenhouse gas emissions.

#### CES (Community Energy System Supplier)

A type of power business that generates electricity based on the demand below 35,000kW in special supply area and supplies electricity to users within the designated district directly without going through the power exchange market.

### Supercritical boiler

Operates at pressures higher than critical pressures. Highly heat-efficient and economical due to the use of dry vapor instead of wet vapor.

#### COD (Chemical Oxygen Demand)

An indicator showing the quality of contaminated water. Expressed in the amount of oxygen consumed by a contaminant in oxidizing organic matters in mg/L or ppm.

#### SS (Suspended Solid)

Particles floating in water whose diameter is 0.1  $\mu$ m or larger, causes turbidity.

#### TOE (Ton of Oil Equivalent)

Converted on the basis of the caloric value of 1 ton of oil.

#### 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.

#### Reserve

Reserves are generating capacity dispatched to ensure reliable supply of electric power. Capacity reserve refers to the total energy generating capacity of power facilities, and supply reserve refers to the capacity available for operation at a given time.

#### Summer peak load control

Summer peak load control aims to improve efficiency of power supply facility use and seek load leveling by narrowing the gap between the highest load and lowest load.

#### ETS (Emissions Trading System)

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

Refers to 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. Load factor improvements lead to significant cost savings.

#### Electricity reserve rate

Electric power in reserve against contingencies or to meet sudden surges in electricity demand.

#### 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.

#### 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  $[CO_2]$ , methane  $[CH_4]$ , chlorofluorocarbon [CFC], nitrous oxide  $[N_2O]$ , and sulfur hexafluoride $[SF_6]$ .

#### GIS (Gas Insulated Switchgear)

Refers to a SF<sub> $\delta$ </sub>-gas insulated metal box containing substation equipments, such as a main bus and circuit breakers. Increasingly being used because it requires less space for installation and is highly reliable.

#### Electricity effect evaluation 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.

#### **Smart Grid**

IT-applied next generation electricity network aimed to improve efficiency of facility operation by connecting and optimizing all elements existing on electricity network from power generation to consumption.

#### CDM (Clean Development Mechanism)

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. CDM is the most widely accepted emissions trading means in the Kyoto Protocol in 1997.

#### Frequency

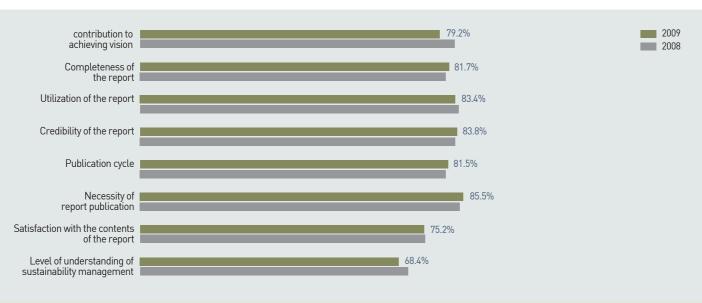
The measurement of the number of times that a repeated event occurs per second. The grid frequency in Korea is 60Hz.

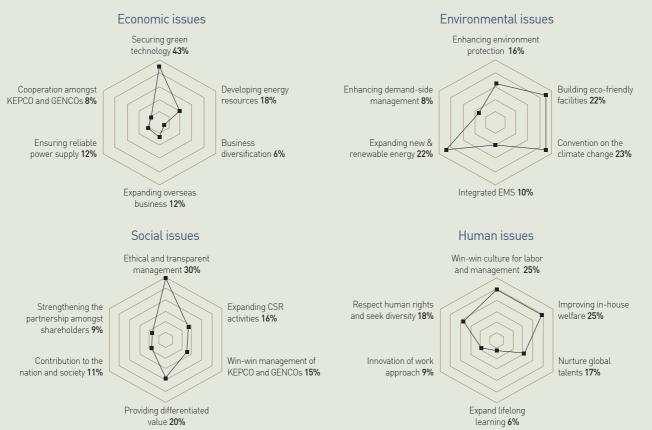
#### Power loss during transmission/distribution

Electricity loss incurred while electric power flows from power plant to substation, transmission/distribution lines, and finally point of consumption, mainly due to resistance.

# Incorporating Stakeholders' Opinions

KEPCO's 2009 sustainability report was prepared in compliance with the GRI 2006 Guidelines [G3]. From planning to final publication, we made utmost effort to collect and reflect opinions of our internal and external stakeholders and build a consensus over its contents to ensure objectivity and credibility of the report. The information below is the findings of the sustainability management survey of internal employees randomly selected. We will incorporate the survey findings in setting management targets in the future and strive to enhance the KEPCP employees' understanding of sustainability management.





## Additional Information

If you want more detailed information, please contact officers in charge of this report.

Aside from sustainability reports, major information on KEPCO is available on the web sites below. KEPCO website (www.kepco.co.kr) provides useful information on KEPCO through various publications such as sustainability reports and annual reports of pervious years, including this year's report.

| Report  | 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<br>Power in Korea      | KEPCO homepage/Investor relations/Investor resources/<br>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  |

## Contact Information

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Environmental management: Green Growth Strategy Team, Power Technology Division(vision21@kepco.co.kr)

Social contribution: Social Contribution Team, Corporate Communications Office (pass@kepco.co.kr)

# Voice of Readers

 ${\sf KEPC0\ looks\ forward\ to\ your\ valuable\ feedback\ on\ this\ report.}$ 

We are ready to accept your opinions and suggestions and will use them to prepare a better report next time.

Homepage http://sustainability.kepco.co.kre-mail helios@kepco.co.kr

## Regarding KEPCO's sustainability report 2009:

| 1. What is your occupation?   |
|---|
| ① Investor/shareholder ② Business partner ③ KEPCO employee ④ Local resident ⑤ NGOs ⑥ Industry ⑦ Academia ⑧ Government ⑨ Press ⑩ Other ( |
| 2. How did you get to know about KEPCO's sustainability report?   |
| ① KEPCO website ② Seminar/lecture/exhibition ③ Newspaper/magazine ④ Other website ⑤ KEPCO employee ⑥ Other ( )                          |
| 3. Which is the most interesting part of this report?   |
| ① KEPCO and Sustainability ② Economy ③ Environment ④ Society ⑤ Human Resources  |
| 4. Which part of this report do you think needs to be supplemented?   |
| ① KEPCO and Sustainability ② Economy ③ Environment ④ Society ⑤ Human Resources  |
| 5. Please give us your free opinions about KEPCO's sustainability report.   |

# **GREAT COMPANY**

As the light that changes the world,

As the hope of global energy industry that will take the lead in building a brighter future,

KEPCO will grow into a Great Company through green revolution.



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