Sustainability Report 2013

Energy for a Better World





Since 2012, POSCO ENERGY has published its annual sustainability report in an effort to show our resolve and achievements regarding sustainable growth in full detail, thereby providing a balanced perspective on POSCO ENERGY to stakeholders.

| Report period | Jan~Dec 2013 (including some record of 2014) |
|------------------------|---|
| Report scope | Every local business premises and some subsidiaries |
| Report standard | In terms of fiscal year, presented in temporal sequence for no less than three years |
| Report guidelines | GRI (Global Reporting Initiative) G4, EUSS (Energy Utility Sector Supplement, Energy Industry Optional Indexes), ISO26000 |
| Report verification | Outside verification organization (Samil PwC), Independent Assurance Report (78-79 pages) |
| Additional | POSCO ENERGY |

'OSCO ENERG' information homepage (www.poscoenergy.com)

Cover Story



the energy slogan that brightens the world symbolizes solar energy. The sun stands for POSCO ENERGY's passion and resolve for sustainability management to make it a brighter world by providing cleaner energy.

The simple and modern image of

Environme

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For any inquiries or feedback relating to this POSCO ENERGY Sustainability Report, please contact us via any of the options shown below.

POSCO ENERGY

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CEO Message



"For the sustainable development of the company, communication with stakeholders based upon genuine organization and trust."

Dear Stakeholders,

I would like to express my sincere gratitude for your interest and support for POSCO ENERGY and its sustainable management. This is our third edition of the POSCO ENERGY Sustainability Report detailing our efforts and performances for sustainable management. Despite the challenging business environment in 2013, POSCO ENERGY saw sales of KRW 2.9 trillion and operating profits of KRW 240 billion. The growth we have achieved was the result of our well-balanced economic, environmental, and social performances, which makes it more significant.

POSCO ENERGY has become a global energy company by contributing to the national economy by providing a stable supply of electricity and actively developing fuel cell energy business as well as new and renewable energy business. Along with the Incheon LNG Combined Cycle Power Plant of 3,000MW, the company currently operates off-gas combined cycle power plants of 300MW in Gwangyang and Pohang.

With the commencement of the operation of the Busan SRF Power Plant that produces electricity out of house waste, the company has completed the second solar photovoltaic power complex in Shinan, and won projects for building an off-gas combined cycle power plant in Indonesia, the Mong Duong2 Coal Power Generation in Vietnam, and the CHP5 Coal Thermoelectric Power Generation in Mongolia. In terms of the business for fuel cell, which have been at the center of attention as dispersed generators, we have successfully completed the construction of the Gyeonggi Green Energy of 58.8MW, the largest fuel cell park in the world, proving our capabilities in undertaking large projects. We are aiming to localize fuel cell up to 100% with the completion of a cell manufacturing plant by 2015.

To strengthen the synergy between gas and power grids and stabilize the fuel supply, we have been working on directly importing LNG and advancing into the LNG terminal business. In addition, the company is striving to ensure a foundation for sustainable growth by entering the Korean base development market and expanding the Independent Power Producers (IPP) business.

We also create environmental value by operating environmentally friendly power plants, expanding competitive domestic and overseas energy development businesses, and actively executing activities for greenhouse gas emission reduction. As a result of the continual environmental investments for improvement of energy efficiency and reduction of environmental pollution in 2013, we reduced energy use by 22,000MWh and have been reducing NOx emissions. In addition, as a trusted corporate citizen, we support the efforts of domestic and overseas stakeholders that respond to environmental pollution and climate change and partake in various related activities. POSCO ENERGY is also active in creating value through cooperation with stakeholders based on trust and consideration. We have also been engaged in shared growth and boosting the local economy through such works as the joint development of reaction steam turbines and building a fuel cell cluster. Having expanded our energy welfare program which was launched in 2012, we have promoted social contribution activities of sincerity and internal stability, including the 1% Sharing Fund Campaign and volunteer work. Recognizing that the basis of such activities is our employees, we have tried to create a pleasant workplace by practicing family-friendly management with strengthening of job competency training, opening of a daycare center, and providing flexible work schedules.

Sustainability is the core of our business approach and activities, which details how POSCO ENERGY deals with economic, social, and environmental issues. I hope the publication of this report allows us to disclose the sustainable management performances of the company and share with you, our stakeholders, our core values of Passion, Communication, Co-Success, and Green Innovation. On behalf of POSCO ENERGY, I sincerely appreciate your continued support and encouragement. Thank you very much.

President & CEO G. S. Awang

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Our Leadership

POSCO ENERGY annually conducts interviews with sustainability management experts in order to review the directions of POSCO ENERGY and reaffirm the commitment of the management. POSCO ENERGY makes strenuous efforts to become a company that grows together with stakeholders through the innovation and the creation of our own unique values.



Sung-Gyu Han **Executive Vice President** [/] Power Generation Business Division Based upon strict environment, safety management and communication with local community, we will provide clean energy.



Kyung-Hoon Lee Senior Executive Vice President POSCO ENERGY will create a healthy company through balanced growth based upon economic, social and environmental considerations.



Chang-Dong Shin **Executive Vice President** We will internalize global standards by implementing sustainability management.



Myung-Chul Lee **Executive Vice President** [/] Technology Strategy Division We will create a brighter world through energy storage, energy recycling, and power efficiency technology development.



Yong-Hee Cho **Senior Vice President** [/] New and Renewable Energy **Development Division** We will secure not only environmental value but also the business competitiveness of new and renewable energy.



Woo-Kyu Lee **Executive Vice President** [/] Management & Planning Division POSCO ENERGY will become a leader in the future energy market by attaining competitiveness in the ever-changing business environment.



Jung-Gon Kim **Executive Vice President** [/] Fuel Cell Business Division POSCO ENERGY will promote the industrialization of fuel cell as a growth engine.





Heung-Yul Yang Senior Vice President [/] Management & Supporting Division We will strive, with upmost

genuineness, for a happy workplace based upon communication and cooperation and co-growth.



Dong-Deok Choi **Senior Vice President** [/] Corporate Audit Division We will realize the ethics system and culture of POSCO ENERGY based upon fundamentals and principles.



responsibility as a corporate citizen, such as contribution to local community and response to climate change.

Sang-Soon Cho

[/] Corporate Relations Division

We will carry out our social

Vice President





Introduction to POSCO ENERGY

POSCO ENERGY – the first and largest private power company in Korea that provides a stable supply of electricity to the metropolitan area - is a global comprehensive energy company that pursues three core energy businesses of power generation, new and renewable energy and fuel cell. POSCO ENERGY, which provides a stable supply of electricity to metropolitan areas, operates Gwangyang and Pohang Off-Gas Combined Cycle Power Plant and has gradually expanded its overseas business to Indonesia where Off-Gas Combined Cycle Power Plant is located, Vietnam and Mongolia. Also, through consistent R&D and investment in the fuel energy area, POSCO ENERGY has grown into the world's largest fuel energy operator and engaged in a variety of renewable energy businesses, such as resource recycling, solar and wind power generation.

General Information (As of Dec.31, 2013)

| Company Name | POSCO ENERGY | No. of Employees | 1,010 |
|--------------|------------------|--------------------|--|
| Total Assets | KRW 4 trillion | Installed Capacity | 3,498MW |
| Sales | KRW 2.9 trillion | Crediting Rating | Corporate Bond AA+, Commercial Paper A1 |





7

6 Off-Gas Combined Cycle Power Plants

- Gwangyang Off-Gas Combined Cycle Power Plant (Units 1-2) 284MW
- Pohang Off-Gas Combined Cycle Power Plant (Units 1-2) 290MW

8

Vision and Core Values

Based on the mission of making brighter world by providing cleaner energy, POSCO ENERGY has set forth its vision, core values, and strategies. The core values of Passion, Communication, Co-Success, and Green Innovation will lay the foundation for the company to unite its employees and accomplish the Vision 2020.



Sustainability Management System

POSCO ENERGY champions sustainability management throughout the enterprise by sharing and promoting its values on sustainability management with employees and implementing a variety of activities for employees' internalization of sustainability management.

Sustainability Management Strategy



Sustainability Management Committee has five working groups in the areas of environmental management, social contribution, shared growth, GWP (Great Work Place), and customer satisfaction in order to share the relevant issues, ensure consistency of sustainable management activities, and to raise awareness about those issues.

Sustainability Management Task Force

The Sustainability Management Group, which is the company's sustainability management organization, establishes and implements plans, reviews progress and executes the measures that are designed to strengthen internal capacity, thereby enhancing value for stakeholders.

Sustainability Management Facilitator

In order to raise internal awareness, improve work efficiency, and provide the means for execution, in March 2014, POSCO ENERGY appointed 19 representatives as sustainability management facilitators for each sustainability management issue. For each quarter, the sustainability management facilitator receives training provided by an outside expert for capacity-building. For each area, the facilitator identifies sustainability management issues and the need of Stakeholders and executes implementation tasks.





Sustainability Management Facilitator Workshop

Communication with Stakeholders

POSCO ENERGY continuously identifies the expectations and interests of stakeholders and reflects them in the strategies and activities of its sustainability management, while using various channels to communicate with stakeholders.

Key Stakeholders and Communication Channels

POSCO ENERGY has defined its key stakeholders as shareholders and investors, the government, local communities, employees, partner companies, and customers and established the channels customized to each stakeholder. The company utilizes communication channels in order to identify the key interests and issues of each stakeholder group, thereby effectively responding to stakeholders' requests.



Value Chain

The business management activities of a company are meaningful when it creates a social value in every value chain, rather than simply creating profits and returning them to the community. POSCO ENERGY intends to create economic and social values in every value chain via sustainability management activities.









Sustainability Management Core Issues

POSCO ENERGY identifies the expectations and issues of stakeholders in order to reflect them in the sustainability management strategy and activities and communicate with stakeholders via various channels.



STEP Identify Issues of Sustainability Management



1-1. Analyze and Benchmark Domestic and Foreign Standards

The company identified 24 issues related to sustainability management by analyzing a group of domestic and foreign standards of sustainability management (GRI, EUSS, ISO26000 and UNGC), peer group benchmarking (key activities and issues), and advice from sustainability management experts.

| Sustainability Management Issue | Sustainability Management System | Economy | Environment | Society |
|------------------------------------|-------------------------------------|---------|-------------|---------|
| 24 | 5 | 6 | 5 | 8 |

1-2. Media Analysis

POSCO ENERGY conducted a media analysis on its sustainability management activities by examining 797 articles published in 2013.





STEP Evaluate level of Interest and Importance to Business

| 0 | 2 |
|----------|---|
| <u> </u> | |

2-1. Evaluate Social Concern

| Industry Benchmarking | Identify major issues of superior companies in the same industry - domestic and overseas (17 companies) |
|-----------------------------|---|
| Global Standard Review | GRI G4, UNGC, ISO26000, etc. |
| External Stakeholder Survey | Conduct a survey on external stakeholders (participants:109 persons, sample:297 persons, response ratio:37%) |

2-2. Business Impact Analysis

| Internal Stakeholder Survey | Conduct a survey on management, group leaders, and facilitators |
|-----------------------------|---|
| BOD Agendas | BOD agendas for 2013 |
| Strategy Tasks | Major implementation tasks per group |
| Business Report | Sustainability management-related activities within business report |
| Web-zine | Contents of Web-zine issued 2013 |



Low



The company created a pool of issues on sustainability management and selected the top issues by mapping the results of the evaluation of external interest and business importance in a matrix based on the opinions of stakeholders and the comprehensive analysis. The activities and performance of sustainability management regarding these key issues are mainly disclosed in this report. Issues other than the top ones will also be monitored and managed continuously.

Social Concern

Governance

Stable Governance

In order to meet its own goals and the expectations of stakeholders, POSCO ENERGY is practicing responsible and substantial management. The board of directors, the highest decision-making body of the company, is fully committed to enhancing the value for shareholders and the benefit of stakeholders.

Composition and Procedures of the Board of Directors

The board of directors (BOD) is the highest decision-making authority of POSCO ENERGY and consists of a total of seven directions; four internal directors, two non-executive directors, and one auditor. At the BOD meeting, internal directors with business management expertise and nonexecutive directors are appointed and a financial expert shall be appointed as the auditor via a BOD resolution. The appointed directors shall make major decisions on key management issues regarding the company management and the auditor checks and assesses the performance of directors. The BOD approves the resolutions regarding key management issues. The BOD regulations stipulate that directors who have a special stake in the company should not exercise their voting rights in these meetings

Evaluation and Compensation

Evaluation and compensation for the BOD members comply with a internal merit-based compensation system. Participation and performance in BOD meetings during the tenure of directors are monitored and performance compensation is paid after the evaluation of the executives of POSCO family companies.

BOD Operation and Major BOD Agenda in 2013

For effective BOD operation, regular and extraordinary BOD meetings are held. In 2013, a total of ten BOD meetings were held. The major BOD agendas in 2013 include a total of 32 reported and approved cases: domestic and overseas projects for power generation, new renewable energy investment, CSR, risk management. In order to become a fully sustainable company, POSCO ENERGY will coordinate in a balanced manner the opinions of diverse stakeholders at BOD meetings in which the major decisions of the company are made.

BOD Composition (As of April 2014)

| Classification | Name | Position |
|-------------------|----------------|---|
| Internal | Eun-Yeon Hwang | CEO |
| Directors | Kyung-Hoon Lee | Vice President |
| | Woo-Kyu Lee | Head of Management & Planning Division |
| | Myung-Chul Lee | Head of Technology Strategy Division |
| Non- executive | Dong-June Yoon | Vice President of POSCO (Management Infra Division Head) |
| Directors | Gyung-Chul Gu | Executive Director of STIC Investment |
| Standing | Dong-Deok Choi | Head of Ethical Management Division |

Shareholder Status (As of December 2013)

BOD Activities

No. of meetings

10

32

Attendance

95.7%

No. of approved agenda



Ethical Management

Fair Trade

POSCO ENERGY conducts fair trade compliance activities on a continuous basis and promotes fair and free competition, thereby improving the market mechanism, suppressing the concentration of economic power.

Introduction and Operation of the Fair Trade Compliance Program

POSCO ENERGY introduced the fair trade compliance program (CP) in October 2009. For transparent and ethical transactions, the company developed guidelines and the standing auditor establishes and implements specific action plans. To ensure that all employees understand and comply with the laws and regulations, the company offers compliance programs and an online education program, 'Easy to Understand Fair Trade'. The company continues to develop in-house experts, who can perform their jobs with thorough understanding of law, through regular training sessions from specialized agencies. Also, the training that is provided utilizes internal and external instructors (law firms and in-house attorneys, the person in charge of POSCO fair trade). The company also distributed a handbook on fair trade to all departments, and encouraged employees to practice fair trade in their daily lives. Furthermore, the company is taking disciplinary action against violators as stipulated in the HR policy.

Autonomous Inspection of Fair Trade

Declaration of Ethical Practice and

Communication with Trust

POSCO ENERGY has introduced a system that enables employees to autonomously check whether they are violating the laws and requlations of fair trade and takes measures against the risks as soon as they are reported. The fair trade compliance committees are held for each quarter, promoting the autonomous inspection culture. Based on such activities, the potential violations have been prevented and the company has contributed to the fair and free market economy; as a result, it obtained "A" grade for CP grade evaluation (valid for two years).

Ethical Management

any challenges.

Ethical Management System

POSCO ENERGY continuously implements ethical management activities by internalizing the new ethical management culture that values the fundamentals and principles. As part of such efforts, the Ethical Management Team solely responsible for ethical management supports the internalization of ethical management by establishing regulations, offering programs on ethical practice as well as education on the prevention of unethical behavior, and checking any violations of the code of ethics.

POSCO Family Code of Conduct

The code of ethics of POSCO ENERGY is based upon the fundamental motto that the continuous growth of the company and the instilling of correct values among the directors and employees are most important. Also, in order to keep pace with global trends, the values are not solely focused on anti-corruption – Human rights, the environment, and shared growth are emphasized as well. Under the code of ethics, the behavioral principles and practice guidelines are established in order to encourage the compliance of every director and employee. In short, at POSCO ENERGY, everyone practices ethical management and as a result, the company has received good reviews as a model company for excellent ethical management.

Composition of Shareholders

POSCO ENERGY has made corporate ethics a part of its corporate culture and implements various ethical management training and activities for the company's survival and growth regardless of

Ethical Management Program

Ethics Helper Program / Each division assigns an ethics helper for the Programs on Corporate Ethics Autonomous Practice so that the ethics helpers can assist in the implementation of the ethical practice activities of their responsible division. The ethics helpers serve as messengers for ethical practices conducting such duties as ethical consultations, spreading related information and notifications, and training.



Programs on Corporate Ethics Autonomous Practices

Programs on Corporate Ethics Autonomous Practice / POSCO ENERGY has operated the Programs on Corporate Ethics Autonomous Practice since 2010 through which employees voluntarily identify ethical risks of their respective divisions and identify appropriate assignments to prevent unethical behaviors, while the executives of each division take the lead in such activities. Each division selects at least two ethical assignments including an assignment to prevent unethical behaviors to resolve ethical risks of the division and an action that can be taken in daily life to internalize ethical management.



Ethics Violation Report Center

 Cyber Sinmumgo Operation of English cyber Sinmungo via overseas report receipt

- Ethics Violation Report System Korea Corporate Ethics Management Research Institute
- Ethics and Fair Trade **Counseling Department**

Ethics Violation Report and Compensation System / For the establishment of ethical corporate culture, POSCO ENERGY operates ethics violation report system and the person who reports gets up to KRW 1 billon.

Ethics Training / In order for our ethics violations to be rooted out, POSCO ENERGY provides training on ethics violation and sexual harassment prevention to all directors and employees. Various ethics trainings, including those for the newcomers, are provided differently for each rank in the company, in addition to ethics education for partners in connection with co-success activities by preventing ethics violations regarding stakeholder. In particular, in order to reinforce leadership and ethics, the leaders receive group training and the ethics training room is operated along with directors. Also, director ethics sessions are planned in line with the POSCO ethical management department in 2014.

Participation of Ethics **Training by Employees**



Inclusive Ethical Management Participation / In order to encourage directors and employees to participate in ethical management activities, various activity programs are being implemented: ethics management issues are published via the company-wide intranet pop-ups, helpline PR stickers are distributed, a present return center is operated during the holiday season, a small wedding commitment is announced. Going forward, POSCO ENERGY will make its best efforts to raise the awareness of directors and employees regarding ethics management and instil a transparent ethics culture throughout the company.

Risk Management

To act pre-emptively toward risks that might affect the company's business activities for continuous growth, POSCO ENERGY has established its risk management system and has managed such risks through inter-division cooperation.

Risk Management Strategy

Under the responsibility of the CEO, POSCO ENERGY defines and manages the risks related to strategy, finance, law, procurement, EHS, maintenance, manufacturing, human resources, and ethics by division and position. Moreover, the company identifies the risks that can negatively affect stakeholders in advance, reflects them in the decision-making, and makes all-out efforts to prevent the subsequent loss through self-assessment.

relevant division.

Management Audit Group Report on abnormalities through SMS Checking of materials for explanation Lack of materials for explanation NO 🐳

Grading and post-management ÷.

Cause analysis and establishment/distribution of measures to prevent recurrence

Risk Management Activities

Autonomous Inspection of Risk Factors

The company has conducted autonomous inspection of risk factors by division and position to identify the risk factors embedded in working-level divisions. Regarding the risk factors, autonomous inspection, improvement, and feedback on activities help the company to establish an effective response system and to internalize the importance of risk management.

Enhancement of the Management Audit Portal

Carrying out advancement of the company management audit portal, POSCO ENERGY strengthens the monitoring and inspection of risks in various sectors including finance, operation, ethics, environment, etc. The process of risk management starts with detection, moves on to pre-inspection, then final inspection by the Management Audit Group, and ends with post-management by the



Material Issues

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We conducted a materiality test and selected such key issues as ensuring new items for future growth and stable electricity supply for economical materiality.

Disclosure on Management Approach (DMA)

To achieve the middle- to long-term financial goals and become a sustainable company, POSCO ENERGY conducts diversified activities such as maximizing revenues through improving the competitiveness of the power generation business, ensuring the original technology for fuel cell, and establishing a foundation for growth with conducting new projects and developing new technology. With an effort to strengthen internal stability, POSCO ENERGY focuses on reinforcing R&D competencies and business innovation to provide better products and services while fairly distributing economic value to stakeholders.

Achievements in 2013 and Plans for 2014

| * * | Achievements in 2013 | KPI in 2013 | Plans for 2014 |
|---|---|---|--|
| Stable Supply of Electricity | Minimized the breakdowns of power plants, contributing to the stable supply of electricity Enhanced the performance of Incheon LNG Combined Cycle Power Plant Units 5-6 Optimized the construction of Incheon LNG Combined Cycle Power Plant Units 7-9 Completed the construction of the Pohang off-gas combined cycle plant earlier than planned and successfully started its operation | Installed Capacity of 3,498MW Sales of KRW 2.9trillion | Achieve zero breakdowns of power plants Ensure internal stability of the earnings base with efficient performance management Achieve early stability of Incheon LNG Combined Cycle Power Plant Units 7-9 |
| Expansion into the Global Market | Completed the construction of off-gas power plants in Indonesia Selected as a preferred bidder for the CHP5 Cogeneration Power Project in Mongolia Diversified overseas markets to Middle East and South America | Installed Capacity of 200 MW generated from off-gas in Indonesia | Completion of constructing the first unit of the Mong Duong2 Coal-fired Power Plant in Vietnam Execution of major project agreements for the CHP5 Cogeneration Power Project in Mongolia Diversification of overseas business portfolio to new and renewable energy Business expansion in existing markets such as Indonesia, Vietnam, and Mongolia Competitive fuel sourcing |
| Foundation for Future Growth | Commenced the construction of a cell manufacturing factory Developed a reaction steam turbine Ensured a foundation for growth by conducting new projects and developing new technology | Accumulated orders for fuel cell of 146.65MW Investment in R&D of KRW16 1billion | Automate processes and complete the construction of the cell manufacturing factory in time Acquire the original technology for the cell to build an independent business structure Ensure the economic feasibility of fuels and advantagement of the set of the set |

We will continue such activities to become Korea's signature energy company in overseas markets, beyond the Korean market. Moreover, we will continue to focus on improving the cost-competitiveness of fuel cell, developing and supplying new and renewable energy while diversifying power generation sources.

- / Economic Value Creation and Benefit Sharing
- / Financial Soundness
- / R&D
- / Business Innovation
- / Power Generation
- / Fuel Cell
- POSCO ENERGY's Creating Shared Value (CSV)
- / Stakeholder Committee



Financial Soundness

Financial Risk Management

POSCO ENERGY manages risks effectively by operating a risk management system covering various financial activities in accounting, tax, and treasury. We ensure financial soundness and minimize volatility with well-diversified debt maturity structures and using financial instruments such as derivatives, etc.

Growth, Profitability, and Stability

POSCO ENERGY enhances financial soundness through maintaining a stable revenue structure and implementing non-debt financing initiatives. We accomplished sales of KRW 2.901.1 billion, and operating profit of KRW 238.2 billion (EBIT margin of 8.2%) in 2013. Although the large-scale investments in establishment and expansion of power plants in the past three years resulted in total loans of KRW1.9 trillion at the end of 2013, the issuance of hybrid securities worth KRW 500 billion has decreased in leverage from 252.3% to 153.2%, which considerably contributed to the financial soundness. Due to such achievements, POSCO ENERGY has a long-term credit rating of AA+ and a short-term credit rating of A1, being recognized as an ability to secure sound funding, as well as the most excellent financial structure among independent power producers in Korea.



2012

2011

25.4

29.3





F/X Derivatives (%)

Korean Won 69

Credit Ratings

Long-term Credit Rating

Short-term Credit Rating A1

31

Foreign

Currency

\$ USD 100

€ EUR 51

¥ JPY 30

W

Operating Profit (KRW 100 million) 2 382 2012 2,748 2011 1 406

EBIT Margin (%) 2013 8.2 2012 9.8 2011 7.3

Net Income (KRW 100 million) 1 4 4 8 2012 1 778 2011 461

| Net Income Margin (%) | | | | |
|-----------------------|-----|--|--|--|
| 2013 | 5.0 | | | |
| 2012 | 6.3 | | | |
| 2011 2.4 | | | | |

R&D

Promotion Directions and Organization

POSCO ENERGY strengthens its R&D competency to become a profit center based on the mission of providing the value of the current business through R&D activities and ensuring new items for future growth.



In addition, we have professional researchers working for the Technology Planning Group, Green Energy Research Center, and SOFC Research Team under the Technology Strategy Division; POSCO ENERGY strives to secure technical competencies and establish a company-level technical support system. On top of the transformation of the two-story maintenance building in the power plant to an experiment building for the Green Energy Research Institute in January 2013, we have continued research activities to strengthen competitiveness and increase profitability of the power-generation business with the development of new technology.

Technology Development with Shared Growth!

The reaction steam turbine technology that reuses the low-temperature waste heat from generators not only improves power-generation efficiency but also reduces fuel costs. The steam turbines, co-developed with small and medium-sized enterprises (SMEs) in Korea. have resulted in visible research outcomes and been evaluated as a successful case

of win-win cooperation.

Technology development

commercialization

Demonstration for

----- Gas

----- Heat

Electricitv

Improvement of the Efficiency of the Power Generation Business and Leading New Growth Fields

POSCO ENERGY finds R&D opportunities to develop new, leading technology in the energy field, taking the connectivity with business portfolios and results of megatrend analyses into account. With the current key research subjects including recycling of waste resources, responding to demands for energy, and dispersed generation, we are establishing a foothold for mid- and long-term growth through dynamic R&D activities.

Waste Resource Recycling

turbine (middle-low temperature generator waste source to gas

Responding to the Demand for Energy

ponding to

- Sourcing domestic/overseas information on technology and policy, applying suitable strategies to the business
- Maximizing R&D efficiency with close
- management of assignments
- Resolving business risks and maximizing the value of the company's technology by securing and managing strategic patents





Business Innovation

Process Innovation

POSCO ENERGY conducts process innovation (PI 3.0) that reorganizes an ERP system and redefines the business process as well as management operation structure to improve the efficiency of operating systems. With the PI 3.0, we redesign the business process across the company and design an optimal organizational structure for employees to focus on creating value added activity.

PI 3.0 Goals





ERP System Kick Off



System Building Workshop

Current Progress Status

A PI 3.0 task force team was established under the direct control of the CEO in November 2012 and the TF team has been leading the company's PI 3.0 team. The process innovation is carried out by phases of establishment of a master plan, building, and operating an integrated system. Currently it is in a testing phase and is slated to commence operations in July 2014. Some of the systems including SWP, floor plan information, and administrative support systems pre-opened in April.

With the new ERP system, the work process time can be greatly reduced, work-efficiency increased, and the purchase and electricity sales system can be upgraded to world-class level. POSCO ENERGY has also deployed a standard cost management system using the ERP, a first in the power-generation industry, to analyze cost breakdown of power generation and remove wasting factors, thereby reducing costs and increasing profitability.

PI 3.0 Road Map and Achievements

| Establishment of Bui a master plan | | | ilding an integrate system | ed | System operation |
|---|---|--|---|--|--|
| '12.11~'13.02 (As-Is analysis) Find improvement identifying wasted with employees ar assignments to dee → Expected effect KRW 167 billion billion AS-IS and | '13.03~06 (Designing a To-Be model) copportunities throid factors and conduind draw up 22 innois sign a To-Be process t of the innovation of n Investment costs: alysis of the 985 work | '13.07~10 (Detailed designing) ugh cting interviews avation s assignments: KRW 31.6 prk standards | '13.11~'14.01 (System building) Developing an non-ERP along prepare for act Generating wo cases) that fit the | '14.02~06 (Testing) ERP and with four tests to ual operation rk standards (806 he system | '14.07~09 (System stabilization) Operating the ERP Monitoring the operation of the ERP |

Business Innovation Activities

POSCO ENERGY has set its direction of innovation activities as 'Employees all together participate in the innovative activities voluntarily and continuously to solve issues with wasted factors' and conducts company-level activities to instil values.



Quick Six Sigma (QSS) Activities

Along with the QSS Jump-Up activities that carry out innovation throughout the power plants, POSCO ENERGY assigns Senior QSS Improvement Leaders for each operation. The Senior QSS Improvement Leaders have led innovation of change management, facility enhancement, and work environment improvement. Currently the fourth batch of leaders is on duty supported by the company for their continuous innovation activities.

QSS Remarkable Worksite Certification

The company certifies facilities and worksites that have achieved outstanding innovation through the QSS activities as a QSS Remarkable Worksites. By sharing exemplary innovation cases of safety, facility, and work efficiency improvement, employees are encouraged and motivated to engage in innovation activities on a daily basis. With the heat recovery steam generator (HRSG) 7 in the Incheon Plant that enhanced safety facilities and improved efficiency being certified in July 2013 for the first time, three worksites so far have been certified with QSS.

Selection of Strategic Assignments and Conducting D+ Activities

POSCO ENERGY selects and conducts strategic assignments to achieve business goals. To reinforce the ability to take action, the company also conducts the D+ activities along with the innovative activities. We set key performance indicators (KPI) based on our mid- to long-term business strategy, identify improvement assignments accordingly, and connects them with individual MBO. In 2013, 91% of D+ assignments were performed.

Commendation · Encouragement · Appreciation



OSS Remarkable Worksite Certification

Power Generation

Introduction to Power Generation Business

POSCO Energy is Korea's largest private power generator providing 16.5% of the electricity to the metropolitan areas and 4% of the electricity to the entire country. Competing against Korea Electric Power Corporation (KEPCO)'s power plants, POSCO ENERGY especially focuses on LNG power plants. Our LNG power plants quickly respond to the volatility of the domestic electricity demand dealing with peak load electricity use. The high-efficiency power plants (combined cycle power plants units 5-9) focus on continuous operation while low-efficiency power plants (combined cycle power plants units 1-4) run with the daily start-and-stop operation by electricity demand.

LNG Combined Cycle Power Plants

POSCO ENERGY'S LNG combined cycle power plants burn LNG to produce primary electricity in a gas turbine and the waste heat discharged from the gas turbine is passed through a heat recover steam generator (HRSG) to produce high pressure, high temperature steam, which is to be supplied to a steam turbine generator.

LNG Combined Cycle Power Plant Specifications

| Classification | Units 1-4 | Units 5-6 | Units 7-9 |
|----------------------------------|-----------------------------------|-----------------------------------|---|
| Commencement of operation | '95-'02 | #5 : '11.02, #6 : '11.06 | '14.07-'15.01 (Construction in progress) |
| Capacity | 1,800MW | 1,252MW | 1,260MW |
| Composition | GT 100MW×3units ST 150MW×1unit | GT 202MW×2units ST 222MW×1unit | GT 275MW×1unit ST 145MW×1unit |
| Method of Electricity Trading | PPA (Power Purchase Agreement) | CBP (Cost Based Pool) | CBP (Cost Based Pool) |









Technical Cooperation and Information Exchange

POSCO ENERGY promotes the effective operation of facilities through regular technology exchange with power companies and production companies that use the same facilities. We strive to secure the measures of effective facility operation through the following ways: sharing technical information on operation and maintenance of the facilities; updating the current status of reserve materials and special tools used for construction and operation; cooperating on the rental of emergency materials; and a joint response with domestic and foreign production companies to deal with any defects in the power- generation facilities.

Boosting Power Generation Efficiency

Improvement Activities to Maintain Efficiency of Power Generation Facilities We have invested in improvement of the facility in the Incheon LNG Combined Cycle Power Plant Units 5-6, which enabled the wasteheat generated from gas turbines to be collected and used for steam turbines. With the enhancement of the facility, the capacity of the power plant increased by approximately 2MW. Moreover, cleaning of gas turbine compressors and regular repairs has minimized performance degradation, allowing more efficient and effective operation of the high-efficiency power plant.

Deploying High-Efficiency Power Generators

In order to contribute to mitigating of a shortage of electricity supply in the country caused by the rapidly increased demand and improving resource efficiency nationwide through enhancing the power-generation efficiency, POSCO ENERGY is currently in the process of replacing its old power-generation facilities with state-of-the-art, high-efficiency facilities.

Zero-Forced Outage

Strengthening Preventive Inspections The possibility of a breakdown of facilities increases in proportion to their usage. As such, POSCO ENERGY has expanded the online inspection of facilities rather than the existing PM maintenance and takes preventive measures following the schedule of facility replacement to prevent the occurrence of failures. The facilities are monitored based on the inspection checklist to maintain their optimal conditions while abnormalities of the on-site equipment are detected in advance with close inspections and corrected in a timely manner to prevent any unexpected breakdowns.

Improvement of Operational Workforce Competencies

The LNG combined cycle power plants require a high level of operational skills due to their more frequent operation and suspension than base-load stations. Accordingly, we have enhanced the soundness of the facilities through cooperation among the divisions of power-generation operation, technology, and maintenance and strengthened the ability to cope with emergency situations through the "Operator Upskill Training." The company strives to respond to emergencies in a timely manner by accumulating facility maintenance skills through internal recruiting and training of maintenance workforce, and running a task force for around-the-clock maintenance.



Off-Gas Power Plant

Off-Gas Power Plants with Resource Recycling

Off-gas is generated from blast furnaces and 20% of it is used for the general steelmaking processes and the rest remains in excess. Using the excessive gas to produce electricity is off-gas power generation.

Timely Completion of Off-Gas Combined Cycle Power Plant in Pohang, Korea

Pohang Off-Gas Combined Cycle Power Plant / The Pohang Off-Gas Combined Cycle Power Plant began operation of unit 1 in September 2013 and unit 2 in March 2014, currently supplying 290MW of electricity per hour. Along with the existing off-gas, the plant reuses FINEX off-gas (FOG) generated from the FINEX process which was developed by POSCO. When using FOG, the power plant generates significantly more electricity as its calorific value is double that of blast furnace gases (BFG). In addition, the power plant reuses the heat generated from gas turbines by sending it to steam turbines to produce electricity; its efficiency is approximately 46% whereas that of the existing off-gas power generators is around 38%.

Off-Gas Power Plant in Indonesia

Construction of the First Overseas Power Plant / POSCO ENERGY completed the construction of an off-gas power plant of 200MW based on the accumulated technical skills in Cilegon, Indonesia in January 2014, which is the first overseas power plant of the company, and the first integrated steel mill off-gas power plant in Southeast Asia. Consisting of two 100MW units, it is expected to produce 200,000 kW of electricity an hour using the off-gas generated from the steel mill which can supply 600,000 households a year.

| Classification | Gwangyang Units 1-2 | Pohang Units 1-2 | Indonesia Units 1-2 |
|------------------------------|--------------------------------|--------------------------------|----------------------------|
| Commencement of Operation | #1 : '10.08 #2 : '10.12 | #1 : '13.09 #2 : '14.03 | #1 : '14.03 #2 : '14.04 |
| Capacity | 284MW | 290MW | 200MW |
| Composition | GT 86MW×1unit ST 56MW×1unit | GT 88MW×1unit ST 57MW×1unit | ST 100MW×2units |
| Fuel | BFG, COG | FOG, BFG, COG | BFG, LDG, COG |
| Efficiency | 45.9% | 45.7% | 36% |



Pohang Off-Gas Combined Cycle Power Plant Indonesia Off-Gas Power Plant

Fuel Cell

Challenges Posed by New Markets

POSCO ENERGY has contributed to the development of the new and renewable energy industry with its fuel cell business. The company has localized 70% of BOP and Stack while establishing an independent service network for customers and an independent construction system. In addition, the company has conducted various R&D activities on fuel cell to contribute to development of new items for national growth, building competencies in technology, guality, customer satisfaction, organization, and personnel matters to improve the performances of its products and services.

Product Line-up

100kw

50m² (15 pyeong) Small to medium-sized building



The World's Largest Fuel Cell Park

POSCO ENERGY has installed more than 115.6MW (which can supply 300,000 homes) and completed construction of the world's largest fuel cell park of 60MW in 2013 in Hwaseong City, Gyeonggi-do called the Gyeonggi Green Energy. The Gyeonggi Green Energy fuel cell park consists of 21 fuel cell energy power plants which can supply electricity to 35% of households in Hwaseong City (population of 520,000 of 200,000 homes). The Gyeonggi Green Energy is expected to contribute to stabilization of the national electricity grid using new and renewable energies and become an exemplary case of distribution power generation.





Korea South-East Power, Bundang (Korea's First FIT Facility in 2006)



Distributed Power Generation in the Metropolitan Area, Nowon, Sangam(2010), and Seoul



Second MPC(2011), Korea's First RPS Facility



TCS1(2011), Daegu, First 10MW-Power Plant

Establishment of Independent Business Infrastructure

Construction of a Cell Manufacturing Plant / POSCO ENERGY is working hard to build an independent business infrastructure of fuel cell. Since the establishment of a strategic partnership with Fuel Cell Energy (FCE) of the USA, the company has localized BOP in 2008 and Stack in 2011, self-producing them at its own manufacturing plants. Throughout the localization process, POSCO ENERGY promotes a virtuous cycle that expands the supply chain, including a number of domestic SMEs, and creates excellent examples of win-win cooperation throughout the cycle. The company is also in the process of constructing a plant for the in-house production of cell, a key component for fuel cell facilities.



Bird's-eye View of the Cell Manufacturing Plant

Groundbreaking Ceremony

POSCO ENERGY is expecting to strengthen its overall business competitiveness, which includes cost reduction, quality stabilization, shortening of deadlines, and development of exclusive models with the in-house production of cell, a key component of fuel cell. Its competiveness will lead to customer satisfaction, and further, improvement of independence of the fuel cell industry and expansion of the market.



Building a Regional Cluster

POSCO ENERGY is planning to build a cell manufacturing plant of 6,300 pyeong (20,826 m²) in its fuel cell manufacturing complex in Pohang, Gyeongsangbuk-do (North Gyeongsang Province) by the first half of 2015 to produce 70MW of cells a year. With the construction of the plant, the company has been focusing on building a domestic supply chain as well as an industrial cluster of fuel cells to contribute to boosting local economy by cooperating with SMEs and creating new jobs. Such efforts have been recognized by local governments including North Gyeongsang Province and Pohang City; the local governments are planning to foster Pohang as a cluster of fuel cells and invest KRW 22 trillion in 30 major companies including POSCO ENERGY and green industries to create economic effects. In line with the plan, POSCO ENERGY has established a plan to build leading infrastructures such as the Hydrogen and Fuel Cell Power Valley and New and Renewable Energy Certification Center. The company will serve a vital role in boosting the local economy by expanding win-win cooperation with SMEs and directly and indirectly creating jobs through continuously strengthening the industrial cluster of fuel cells and increasing industrial intensity.

region.

Fuel Cell Project Using BOG / POSCO ENERGY is undertaking the world's first project on using boiloff gas (BOG) generated from LNG production facilities for fuel cells. It collects the BOG naturally generated by the temperature and pressure difference in the production facilities such as LNG storage tanks and carriers to produce electricity.

Resource Recycling and Fuel Cell

Gwangju New and Renewable Energy Complex Project / POSCO ENERGY signed an MOU with Gwangju Metropolitan Government on the Gwangju New and Renewable Energy Complex Project in November 2013. The project will not only enable the complex to supply a significant amount of new and renewable energy (47MW) to the city but also recycle the existing resources by using idle lands and excessive gasses generated from the water recycling center. Moreover, it is aimed to contribute to the national economy by fostering new and renewable energy businesses in the



POSCO ENERGY's Creating Shared Value (CSV)

Changes in Energy Paradigms

Energy is essential to maintain society. A tremendous amount of energy is needed to make, move, and use products and humankind has continuously strived to make the energy more efficient. Such issues as resource exhaustion, climate change, and environmental pollution have increased the need to create new energy and make the existing energy more efficient. POSCO ENERGY recognizes that the energy source we use is the energy source that will be used by and shared with the next generation. POSCO ENERGY is trying to serve its role as an economic entity to create added value and create a virtuous circle of energies through identifying energy that is wasted and developing future energy sources.



Fuel Cell Power Plants in Urban locations

The Fukushima nuclear accident, followed by Korea's blackout, and issues involving with construction of transmission cable towers in Miryang, have made us rethink the social impact of power-generation facilities that are concentrated in certain areas, caused by power supply that only focuses on large-scale power generators. Fuel cells are able to respond to electricity demand in a timely manner, being the center of attention as a generation power source distributed that mitigates the instability of supply and demand. Increasing the energy independence of major big cities is expected to improve efficiency of primary energy consumption and reduce social costs by mitigating conflicts with local residents.



Solid Refuse Fuel-Generation Project in Busan

Household waste has been disposed of by land-filling or incineration. However, POSCO ENERGY's SRF generation system in Busan, Korea, separates and sorts flammable waste from the household waste to produce electricity and heat, reducing use of fossil fuel and air pollutant which can be caused when the waste was buried or burnt.



Strengthening Clustering for Industrialization of Fuel Cell

To be competitive with new products, the technical competitiveness needs to be strengthened through clustering with R&D fields. POSCO ENERGY is reinforcing its technical competitiveness with related institutes and research centers while fostering the fuel cell industry. With continuous localization and development of technology, the company is planning to establish a vertical supply chain of the fuel cell industry. Diversifying the application areas, POSCO ENERGY is aiming to work with 3,000 SMEs in Korea by 2020.



stakeholder consensus

Supplying Heating Energy Using the Thermal **Energy in Sewage Water**

The sewage water discharged after treatment has an average temperature of 12°C even during winter months. POSCO ENERGY collects the thermal energy in the waste water using heat pumps and converts it into heating energy to be supplied to nearby areas. The company increases energy efficiency and creates revenues by gathering energies being wasted and supplying them to where needed most.



Stakeholder Committee

POSCO ENERGY is expanding its energy business while striving to achieve its mission, 'Make a brighter world by providing cleaner energy.' The company has held a meeting with the Stakeholder Committee to discuss whether POSCO ENERGY's business is brightening the world and how the company can create greater value for itself and stakeholders in terms of business. The committee reviewed POSCO ENERGY's core capabilities and new energy businesses and suggested that the company needs to consider the stakeholders involved in every step of the business cycle, from the sourcing of raw materials to the use of energy. The committee also emphasized the need for communication and the measurement of the impact of each step.

Date_May 9, 2014 Venue_Conference room of the company headquarters in Seoul



Professor Kim Tai-young Graduate School of Business/ Sungkyunkwan University

Creating shared value (CSV) starts from a direct and influential question, "What is the role and essence of the company?" CSV is a strategy of reverse thinking that solves social issues through core capabilities of the company. The bottom line is how effectively, efficiently and sustainably they can create shared value utilizing their core capability. While mitigating such social issues, companies create customer and economic values and share such values with stakeholders.

Adviser Kim Young-woo _Shared Growth Committee

Companies are economic entities that can create added value. I think that POSCO ENERGY's business activities are a good example of creating and sharing value, considering the company creates economic value by investing in the fuel cell industry, forming a cluster for shared growth with suppliers, and striving to solve social issues such as climate change.



ENVIRONMENT



Director, Choi Gwang-lim Business Institute for Sustainable Development/KORCHAM

Energy policies have promoted distributed power generation. This means energy supply facilities will be disseminated to where there is demand, thereby increasing contact points with people. To wipe out concerns about environmental impacts of such facilities, data related to environmental load that can be shown to and convince stakeholders needs to be collected and managed.

| POSCO ENERGY's Creating Shared Value |

Climate change • Energy reduction Resource recycling • Eco-friendly energy resources

• Shortage of power transmission and distribution facilities Things that need to be resolved with in society

ENTERPRISE



Director Song Soung-soo Global Policy & Relations Team Samsung Electronics

From compliance, to strategic social contribution, and shared value creation – for a company to practice sustainability, there are many ways to choose from, depending on their reasons for sustainability and environments required. POS-CO ENERGY is required to thoroughly review the purposes of creating shared value.

Deputy Managing Director Chung You-ah_Civil Society Cooperation Office, KOICA

POSCO ENERGY's business can be categorized as a social investment business which can be exported to overseas markets. Internationally, assuring energy supply to developing countries has been a crucial social issue. I believe that POSCO ENERGY's business models can serve as a solution to supply energy to developing countries while reducing environmental impacts. However, it is important to analyze whether such business (and cost) is applicable to those countries and take advantage of partnership with local companies.

POSCO ENERGY will

• Develop and expand the waste to energy business that uses waste resources to produce electricity, steam, and heat. • Expand the distributed power generation business using new and renewable energy to solve social issues. • Create a new industrial ecosystem by promoting the growth of an industrial cluster of fuel cell.

NEXT





SOCIAL CONTRIBUTION





Material Issues

21100

22100

- **Disclosure on Management Approach (DMA)** To practice environmental management systemically, POSCO ENERGY has established an environ-

Achievements in 2013 and Plans for 2014



| | KPI in 2013 | Plans for 2014 |
|------------|---|--|
| ergy | • 8.42 GJ/MWh Energy consumption | Monitor and make a proactive response to policies on climate change |
| | • 0.71 tCO ₂ /MWh GHG emissions | Reduce energy consumption through waste heat recovery and improvement of facility efficiency |
| | • 22,304MWh Energy reduction | Expand Korean and overseas competitive power generation businesses |
| ergy ne | | |
| | • 0.13kg/MWh | Optimize the ISO14001 standard |
| igh | NOx emissions | Obtain environmental management system certification for new worksites |
| | Water consumption | Establish measures to monitor the Total |
| | • KRW 12,818 million Environmental investments | Maximum Daily Loads for NOx, and manage emission intensity |

Response to Climate Change

Strategy to Respond to Climate Change

GHG Emissions Reduction Strategy

For the reduction of GHG emissions, POSCO ENERGY is promoting the new and renewable energy business and activities to increase the efficiency of power facilities, through which the annual energy consumption has been reduced by 22,304MWh.

| Increasing the Efficier | ncy of Power Facilities | New and Renewable | e Energy Business |
|-------------------------|-------------------------|---------------------|-------------------|
| • Optimizing the | • Deploying | • Expanding the new | • Promoting a |
| efficiency of power | high-efficiency | and renewable | waste-to-energy |
| facilities | power facilities | business | business |

Climate Change Response Task Force

POSCO ENERGY has formed a task force to respond to climate change, supervising their roles and responsibilities. The task force establishes plans to reduce GHG emissions and encourage each worksite to engage in GHG reduction activities.

Improvement of Energy Efficiency

It is essential to operate high-efficiency power generations and reduce energy use when it comes to electricity generation. POSCO ENERGY engages in making continuous improvements for facility efficiency, recycling waste heat, and conducting company-level energy saving campaigns to optimize the generator operation and save energy consumption.

| Energy Use Reduction Activities | Energy Reduction (MWh/year) | GHG Reduction (tCO ₂ /year) |
|---|-----------------------------|--|
| Deployment of high-performance washing facilities for gas turbine compressors | 20,611 | 9,633 |
| Controlling sea water circulation pumps with inverter | 1,216 | 1,594 |
| Introduction of lighting sensors | 270 | 126 |
| Installation of high-efficiency lighting system | 207 | 96 |
| Total | 22,304 | 11,449 |

Energy Consumption and GHG Emissions

As POSCO ENERGY has increased the amount of electricity produced, its GHG emissions have grown accordingly. However, the company strives to reduce GHG emissions produced by electricity generation through a series of energy reduction activities such as introducing high-efficiency facilities, and making continuous improvements to facilities.

| Classifica | ation | 2011 | 2012 | 2013 |
|------------|---------------------------------------|-----------|-----------|------------|
| Energy | Total (TJ) | 104,784 | 128,403 | 131,819 |
| | Direct consumption (TJ) | 104,365 | 128,146 | 131,555 |
| | Indirect consumption (TJ) | 419 | 257 | 264 |
| | Intensity (GJ/MWh) | 8.18 | 8.13 | 8.42 |
| GHG | Total (tCO ₂) | 8,895,004 | 9,863,100 | 11,048,184 |
| | Direct emission (tCO ₂) | 8,875,412 | 9,849,384 | 11,035,778 |
| | Indirect emission (tCO ₂) | 19,592 | 13,716 | 12,406 |
| | Intensity (tCO ₂ /MWh) | 0.69 | 0.62 | 0.71 |

* The GHG data from 2011-2012 has been changed due to the GHG emission calculation method for off-gas combined cycle power generation revised by the government

New and Renewable Energy Business

New and Renewable Energy Business

Renewable Energy Business 548.1



Solar Power

Plans to Develop New and

• RPS (Renewable Portfolio

 REC(Renewable Energy Certificates)

333.1

(MW)

2015 139.1

Standards)

POSCO ENERGY has independently developed and is operating solar (photovoltaic) power plants in the Palgeum-myeon area, located in Shinan-gun, Jeollanam-do. In particular, the Shinan solar power plant has been recognized for its outstanding work in minimizing the environmental impact on surrounding areas and creating eco-friendly synergy with local communities by utilizing a disused salt farm that had closed for years. The plants of 7MW are able to produce electricity of 9,300MWh a year which can be supplied to 3,000 homes for the next 20 years. The company plans to construct another power plant of 7.5MW, thereby will operate a large solar power plant of 14.5MW by August 2014. The solar power plants will ensure REC and stable incomes while providing measures to respond to the government's RPS.

Wind Power

POSCO ENERGY is developing Korea's first commercial offshore wind power complex of 30MW near the northwestern part of Jeju island, and also planning to develop a large-scale onshore and offshore wind power complex of 99.6MW in Shinan-gun, Jeollanam-do. The wind power plant in Jeollanam-do is expected to contribute to revitalizing the local economy by using wind power turbines assembled and produced within the region.

SRF (Solid Recovery Fuel) Business

POSCO ENERGY has developed a solid recovery fuel (SRF) business, which uses combustible waste to produce electricity and supply the heat generated during the process to industrial facilities. Completed in October 2013, the company's SRF facility currently handles 900 tons of house waste a day in Busan and produces 25MW of electricity, which can be supplied to 40,000 homes, using the solid fuels generated from the waste.

Use of Sewage Heat Energy

POSCO ENERGY's sewage heat energy business collects and recovers the heat energy generated from sewage water, and supplies heating energy to nearby areas. Since being designated in February 2012 as a contractor for the Tancheon Water Reuse Center Using Sewage Heat project, the company has been undertaking a project to complete the facility by October 2014. The center is expected to supply 200,000Gcal of heat energy to 20,000 homes.

POSCO ENERGY is expanding the business field of new and renewable energy from power generation to building a total value chain of eco-friendly energy businesses. Accordingly, we have set the new and renewable energy business a sub-core business, spurring the development of new businesses using new and renewable energy such as off-gas, solar energy, wind power, and resource recycling based on our experience and capabilities accumulated over 40 years.

> To become an eco-friendly energy-leading company through strengthening business capabilities in new and renewable energy

Successful completion of the existing projects

Efficiently responding to the RPS and identifying new business opportunities

Enhancing business development capabilities



Photovoltaic Power Plants in Shinar



ore Wind-Power Plant



SRE Power Generation Facility in Busan



Tancheon Water Reuse Center Using Sewage Heat

Eco-Friendly Management

Environmental Management System

Environmental Management Strategy

To achieve the vision of 'World Best GREEN Energy Company' POSCO ENERGY has established and practiced the four directions of Green System, Green Operation, Green Business and Green Communication along with action strategies.



Organization of Environmental Management

The Technology Team under the Power Plant Division supervises the organization in charge of the environmental management system and supports each worksite. In addition, the environmental management working committee is operated at company level to manage the current status of the environmental management at each worksite, discuss the relevant issues, and carry out the activities to strengthen environmental management

Environmental Management System Certification

To optimize the operation of environmental facilities and spread awareness of environmental improvement, POSCO ENERGY has adopted and applied ISO14001. The company is advancing the environmental management framework with a guarterly self-assessment and post-assessment conducted by external experts.

Company-Level Management of Environmental Risks

POSCO ENERGY has established and managed emergency response plans for each worksite against environmental accidents and emergencies, conducting a mock emergency drill quarterly. We have also identified potential risks in such aspects as the air, water quality, waste, soil, and chemical substances to assess urgency of each risk and establish response measures. POSCO ENERGY's partners related to environmental risks are subject to the environmental risk management and assessed by visit inspection, monthly meetings, and management evaluation.

Operation of Eco-Friendly Power Plants

Prevention of Environmental Impacts Environmental Impact Assessment

To minimize environmental impacts during the construction of power plants, POSCO ENERGY is conducting an environmental impact assessment. The environmental impact assessment allows the company to analyze such impacts to the location and habitat of the power plants after completing the construction, which helps minimize environmental impacts to local communities. None of the operated sites of POSCO ENERGY have been identified as located in biodiversity protection areas.

Before Construction

Predict and prevent environmental impacts arising from power plant construction

During Construction Identify and mitigate environmental impacts during construction

Environmental Investments

POSCO ENERGY minimizes environmental impacts while conducting its business by investing in air pollution control, response to climate change, and wastewater and waste management for the optimal installation and maintenance of environmental facilities and environmental impact reduction technology. The company invested approximately KRW 12.8 billion in such areas in 2013 and will continue making environmental investments.

Maior Environmental Investments

| Air Pollution Management and Response to Climate Change | |
|--|---|
| • Installation of air pollution prevention facilities for the Incheon LNG Combined Cycle Power Plant Units 7-9 | • |

Compliance with Environmental Laws

POSCO ENERGY has been rigorously complying with environmental regulations and has not violated such regulations. The company especially has set stricter standards for the air and water pollutants control than the government standards to minimize environmental pollution.

Minimization of Environmental Impacts

Fuels and Energy With the increased amount of electricity produced by the Incheon LNG Combined Cycle Power Plant and Off-Gas Combined Cycle Power Plant, the amount of fuels used by POSCO ENERGY has also increased. However, the company has conducted projects and assignments for energy reduction and strived to maximize energy recovery.

| Fuel Consumption | 2011 | 2012 | 2013 |
|------------------------|---------------|---------------|---------------|
| LNG (Nm ³) | 1,967,934,125 | 2,540,069,749 | 2,603,784,684 |
| BFG (Nm ³) | 5,068,025,525 | 4,834,404,296 | 5,091,653,614 |
| COG (Nm ³) | 25,103,776 | 51,319,218 | 58,652,766 |
| FOG (Nm ³) | - | - | 110,983,038 |

After Construction Control environmental impacts during power plant operation

Environmental Investments (KRW million)

Air Pollution Management and Response to Climate Change

| 2011 | 2012 | 2013 |
|--------|-------|-------|
| 20,730 | 7,450 | 9,525 |

| Waste and V | Vaste Wat | er Control |
|-------------|-----------|------------|
| 2011 | 2012 | 2013 |
| 3,392 | 110 | 3,293 |

| Total | | | | |
|--------|-------|--------|--|--|
| 2011 | 2012 | 2013 | | |
| 24,122 | 7,560 | 12,818 | | |

Waste and Waste Water Control

• Establishment of the discharge water facility for the Incheon LNG Combined Cycle Power Plant Units 7-9

Installation of waste transfer stations for Pohang Fuel Cell Power Plant

Water

Water is used for the production of steam and operation of facilities. The water used for all the operations is 100% tap water excluding the Gwangyang Plant, which uses both tap water and industrial water. POSCO ENERGY has continuously reduced the volume of water used with reuse and recycling of water and constructed infrastructures to recycle water for the LNG Combined Cycle Power Plant Units 7-9.

| Water Consumption | 2011 | 2012 | 2013 |
|---|-----------|-----------|-----------|
| Total (ton) | 2,261,989 | 2,080,858 | 2,079,558 |
| Incheon LNG Combined Cycle Power Plant (ton) | 1,297,331 | 1,316,858 | 1,357,955 |
| Gwangyang Off-Gas Power Plant (ton) | 945,822 | 735,398 | 689,913 |
| Pohang Fuel Cell Power Plant (ton) | 18,836 | 28,602 | 31,690 |

Chemical Substances

Chemical substances are used to produce pure water, the water used for power generation, and treat discharged water. In order to comply with the environmental regulations, prevent accidents, and adequately manage chemical substance facilities, POSCO ENERGY regularly inspects the status of such facilities and possible leakages with daily and weekly inspections. To prevent the leakage of chemicals, all the chemical-related facilities have the system to transfer the leaked chemicals to treatment plants should any leakage occur, and proliferation-prevention systems have been constructed around the facilities. In addition, outsiders are not allowed to enter the facilities without permission, and a discharge of chemicals is prevented through a strict management of locks to the facilities and entrances.

Air

POSCO ENERGY has established a telemetry monitoring system (TMS) for real-time monitoring of nitrogen oxide (NOx), the only pollutant emitted from the company's power plants. We have set our own standards for NOx emissions that are more stringent than the legal limits, voluntarily reducing such pollutants to avoid environmental impacts.

| NOx Emissions | 2011 | 2012 | 2013 |
|---------------------------------|-------|-------|-------|
| Total NOx emissions (ton) | 2,499 | 2,126 | 2,045 |
| NOx emission intensity (kg/MWh) | 0.20 | 0.13 | 0.13 |

Air Pollutants Emissions (ppm)

Power Plant (Units 1-4)

Incheon LNG Combined Cycle Incheon LNG Combined Cycle Power Plant (Units 5-6)



20





(Legal standard _ below 50)

Discharged Water Quality

With the company's own standard for water pollutants, which is set more stringent than the legal standard, POSCO ENERGY monitors abnormalities of waste water discharging and prevention facilities using the TMS. In addition, the company has a management system to quickly grasp the situation and take measures should any problems occur in relation to the water quality, with regular self-assessments on the water pollution standards such as COD, SS, and pH, pursuant to the relevant regulations.

| Classifica | tion | 2011 | 2012 | 2013 | Legal Standards |
|---------------|---|-----------|-----------|-----------|-----------------|
| Water disc | harges (ton) | 1,367,166 | 1,427,948 | 1,223,459 | - |
| Water disc | harge intensity (ton/MWh) | 0.11 | 0.09 | 0.08 | - |
| COD (mg/L) | Incheon LNG Combined Cycle Power Plant | 3.2 | 2.9 | 3.4 | 130 |
| | Gwangyang Off-Gas Combined Cycle Power Plant | 6.4 | 6.5 | 5.0 | - |
| SS (mg/L) | Incheon LNG Combined Cycle Power Plant | 1.8 | 1.2 | 2.3 | 120 |
| | Gwangyang Off-Gas Combined Cycle Power Plant | 8.2 | 6.4 | 4.0 | - |

* COD (Chemical Oxygen Demand), SS (Suspended Solid)

Waste

The general and designated wastes generated during the operation or repair of power generation facilities are sorted and separated to be recycled or treated by an outsourced company. The company has increased a recycling rate of wastes from 29.3% in 2011 to 44.8% in 2013 by reducing the waste generation and increasing the amount recycled.

| Waste | 2011 | 2012 | 2013 |
|-------------------------------------|-------|---------|---------|
| Waste generation (ton) | 721.0 | 1,126.5 | 1,202.1 |
| Waste generation intensity (kg/MWh) | 0.06 | 0.05 | 0.05 |
| Recycling rate (%) | 29.3 | 37.9 | 44.8 |

Management of Persistent Organic Pollutants

POSCO ENERGY is equipped with facilities for managing Persistent Organic Pollutants (POPs) that include oil-filled transformers, condensers, and metering outfits, as well as equipment using electrical insulating oil as insulating medium. These facilities are reported, used, and discarded in accordance with the Persistent Organic Pollutants Management Act.

Soil Contamination

POSCO ENERGY strives to not only manage soil conditions of its facilities but also the soil of local communities and the national environment. To do so, the company reports and manages the facilities which may cause soil contamination, in accordance with the relative laws. Furthermore, we prevent the corrosion or oxidation of facilities through regular soil contamination tests, and ensure that no pollutant is leaked. In the case of a leakage, the company makes sure all the leaked pollutants flow to the wastewater treatment plant to prevent proliferation.

Material Flow





Eco-friendly Communication

Environmental Education

POSCO ENERGY has established and offered systemic programs to employees for them to adopt an eco-friendly mindset and strengthen their expertise. Along with the legal training for environmental technicians, customized education programs are regularly provided to employees to satisfy their needs by position or job. When an environmental issue arises, weekly meetings are held for position holders, and employees in charge of such issues are given the relevant training, which makes the programs more practical and efficient.

Environment Education Framework

| Classification | Target | Description | Method | Note |
|----------------------------|--|--|--------------------------|--|
| Environment Management | Persons in charge of environment management | Environment management system | Outsourced training | When changing/newly appointing persons in charge of environment at each department |
| Environmental Experts | Legal managers and persons in charge by environmental sector | Education for air experts Education for water quality experts Education for toxic chemicals managers Education for waste managers | _ | Legal education (once every three years) *Education for persons in charge of waste treatment: upon the request of the concerned agency |
| | | Education for toxic chemical handlers | In-house training | Education for persons in charge of chemicals (once a month) |
| Introduction Program | Newly employed | Outline and management points | In-house training | Upon new employment |
| Environmental Awareness | All employees | Environmental control and issues | Circulation of materials | Bi-monthly |
| | | Outline of environmental management | E-campus | Providing education first to position holders and persons in charge, gradually extending the target to all employees |
| | On-site operators | Environment-related laws and group education points | Group training | Once a year (using the shift work schedule for programs) |



Environmental Education and Emergency Drills

Support for Environmental Management of Partners POSCO ENERGY holds monthly meetings with its partners to strengthen their environment, safety, and health management, providing them with environment-related information and instruction, training programs, and VOC hearing. We also evaluate and manage the status of the safety and environment management of each partner company.



Increasing Awareness of Environmental Management

POSCO ENERGY seeks to accomplish genuine environmental management through the participation of all employees. To help employees participate in environmental activities and management, the company offers them a variety of awareness-raising programs such as Green Office campaign and PR activities. Other promotions and activities held to encourage them to reduce energy use and GHG emissions include using public transportation during business trips, video conferences, bicycle commuting, and managing checklists to ensure power saving in the office.

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2.1.100

Material Issues

In terms of social materiality, the key issues of POSCO ENERGY include creating a great workplace,

Disclosure on Management Approach (DMA)

POSCO ENERGY conducts business activities and manages indicators focusing on key issues for

Achievements in 2013 and Plans for 2014

| | Achievements in 2013 | KPI in 2013 | Plans for 2014 |
|----------------------|--|--|--|
| | Established education programs to improve employees' work competencies and performance commitments | Average education hours per employee: 82 hours | Execute a roadmap for strengthening employees' work competencies Greate a pleasant workplace |
| Employees | Adopted a new position structure agreed by the labor and management | Happiness index: 81.4 points | with communication of trust and on-site management |
| | Began the 'Appreciation Campaign' and settled a labor-management culture of appreciation | Absenteeism: 0.86% | Build a cooperative labor-management relationship based on communication and |
| | Obtained level P for the process safety management (PSM) | | Reinforce the communication for increasing safety management standards for each worksite |
| | | | Improve safety work processes with continuous facility enhancement |
| 8 | Reinforced the customer service competitiveness and organization (opened Hwaseong Office) | Operation rate: 94.3 % | Improve the technical competency for customer service and reinforce the operational structure |
| Customers | Held seminars and technical trainings tailored to product type | | Strengthen customer satisfaction activities Stabilize the quality of operations |
| | Provided real-time customer service for technical issues | | |
| F | Adopted fair trade standards and standardized subcontracting agreements | • Benefit Sharing cost: KRW 783 million | Promote shared-growth activities based on the needs of supplies |
| Partner | Increased the number of assignments for benefit sharing and rewards | | Reinforce the support programs for secondary partner companies |
| Companies | Held a public recruitment of partner companies to give new companies business opportunities | | Ease the payment condition by expanding the criteria to be eligible as a small company |
| 9.9 | • Expanded the beneficiary areas for the energy sharing project of hope | Average Volunteer hours: 28.9 hours | Internalize social contribution projects and diversify the program content |
| Local Communities | Launched the project of study rooms of love to brighten the world | Participation rate of the 1% Sharing Fund: | Provide social contribution activities taking advantage of the nature of the business |
| | Increased the participation rate of the 1% Sharing Fund | 90.7% | Improve employee satisfaction and accomplishment through the BEST volunteering work |

/ Global Talent Training and Competency Building [/]Happiness Management / Safe and Healthy Workplace / Customer Satisfaction / Shared Growth with Suppliers Social Contribution

03







Global Talent Training and Competency Building

Recognizing that employees are the core of our global competitiveness, POSCO ENERGY recruits and trains highly qualified and motivated individuals, supporting them to become talented employees.

Recruitment of Talented Individuals

The confidence and passion of POSCO ENERGY for securing capable talents is a core value across the business, and the company ensures that it recruits and nurtures excellent individuals.

POSCO ENERGY's Ideal Employee / POSCO ENERGY seeks to recruit individuals who focus on the value of challenges and trust to train them as the world's best leaders in the energy sector based on the four core values including Passion, Communication, Co-Success and Green Innovation.



Respect for Diversity / POSCO ENERGY offers equal and fair opportunities to individuals according to their qualifications without discrimination, actively hiring the disabled, veterans, and patriots. We encourage the recruitment of local people in the area where the power plants are located and increase overseas recruitment to expand global leader training and localization.

Talent Development System

POSCO ENERGY seeks to become the world's best GREEN energy company and place its priority on fostering competent individuals. Based on the personnel policy and corporate culture, all employees are trained with basic programs tailored to their position that teach the common values of the POSCO Group, leadership training of trust and communication, job competency programs to improve problem solving skills, and various language learning and overseas programs to strengthen their global competitiveness.

Fostering leaders that

create performances

with trust and

communication

Basic Direction of Employee Training

Basic training tailored to each position to internalize core values and visions

Training experts for each job who have excellent problem solving skills

Reinforcing global competitiveness through various language learning programs

| Average Education Hours and Expenses | Manpower Train | Manpower Training Program | |
|---|---------------------|---|--|
| 2013 82 hours/person 2012 132 hours/person | | Leadership Training | |
| 2011 110 hours/person 2013 | In-House | Leadership education for position holders (1-3 days) | |
| KRW 890 million 2012 KRW 1,090 million | Programs | Education from Innovation Support Center (shiftwork regular courses) | |
| 2011 krw 1,080 million | POSCO | Monthly Saturday education (4 hours/month) | |
| | Programs | Education for newly promoted employees (3 days: executives, team, and group leaders) | |
| | | Chief officer course (6 months) | |
| | Outside Programs | Breakfast with IMI (monthly) | |
| | | Autonomous selection | |
| | | | |

E-learning Programs

Manpower Training System



• Enhancing understanding of other cultures and improving language proficiency

• Training courses for sojourning employees

• Overseas training



World Best GREEN Energy Company

(Global, Reliable, Excellent, Efficient, Nature friendly)

Leadership Competency

Leadership by Position/ Position-Holder Trust Leadership



Strengthening Global Competency

To help employees develop and strengthen global competency, POSCO ENERGY has continuously provided them with foreign language learning programs along with support for their language circle activities, phone language learning courses, and language learning courses tailored for those who are scheduled to be sent overseas. In addition, the company sends employees to power-generation project sites overseas as trainees, provides them with studying abroad programs, support for attending seminars, and academic activities, while striving to recruit and train local people to localize the company's overseas projects.

MBA Program

The company provides employees with an MBA program to nurture enterprising and creative leaders who will lead the future growth of POSCO ENERGY. The program provides full tuition to the selected employees studying MBA.



POSCO ENERGY selects around 40 employees a year (20 employees at a time, twice a year) to send them to countries where the company plans to establish new business. The program allows the selected employees to experience different cultures, learn more about the industries and companies in such countries, and develop the ability to actively respond to changes in the global business environment.



Engineer Dissertation Presentation

Job Competency Program

Engineer Dissertation Presentation

For the improvement of job competency, problem-solving skills and career development of engineers, the company holds an annual engineer dissertation presentation. Engineers select topics for their dissertations, focusing on the fields that require R&D or improvements, and write their dissertations based on their acquired field knowledge. The presentation offers a venue for engineers from all worksites to gather and share their knowledge and information.

Action Learning

POSCO ENERGY provides the Action Learning program to all administrative staff. Action Learning is a learning job competency program that helps employees set their own research themes closely related to their duty and performance, find the problems, and establish problem-solving strategies. The program has helped employees to improve their job competency and spread a culture of learning.

Fair Performance Management and Compensation

To ensure that all employees display their maximum ability, POSCO ENERGY has established a fair and rational performance evaluation system. Based on this system, the company manages the performance of employees, without discrimination of gender, and evaluates them with independent and objective evaluation factors. The company impartially compensates and rewards the employees according based on a performance-based approach.





2013 81.4 points 2012 75.1 points 2011 73.4 points

POSCO ENERGY believes that the happiness and satisfaction of employees form the foundation for improving the competitiveness of the company and to establish its own corporate culture. Based on this principle, all employees are cooperating to help create a pleasant workplace, increase trust within the company and the management, enhance pride in their work and the company, and respect and understand each other. The company conducts annual surveys and interviews targeting all employees to measure the Happiness Index. The Index is measured through various criteria - for example, based on worksite, position, length of service, and gender. The survey results are actively incorporated to improve systems and to establish the future directions for happiness management.

Meetings with the CEO and the Executives

In-House Club

POSCO ENERGY actively sponsors employees' club activities for them to enjoy leisure times and self-development and to encourage the interaction among employees. A total of 27 clubs in various fields including sports, music, and photography are run within the company, which all have been continually and actively supported by the company.

Family-Friendly Management

POSCO ENERGY allows employees to make monthly adjustments to start work at any time between 7 a.m. and 11 a.m. to flexibly utilize their time for self-development, childcare, and education and balance between work and private life. Furthermore, the company designated every 2nd and 4th Wednesday as 'Family Day,' the day all employees must leave the office on time so that they can spend more time with the family.

Opening of Daycare Center and Support for Childcare / Even though POSCO ENERGY is not a company that is obliged to have a daycare center, it has opened one to create a working environment where employees can work happily without concerns about childcare. The company also allows female employees to take 90 days cumulative maternity leave and up to one year of child care leave. Male employees can also take paid paternity leave.

Different Culture Experience Program

Happiness Management Practices

Employee Communication

Happiness Management enables individuals pursue enhanced happiness and the company grows and develops with stakeholders by balancing the overall benefits. POSCO ENERGY seeks to establish its own corporate culture to become a close-knit organization, by internalizing the corporate culture and unifying the visions of both the company and its employees.

Happiness Index Survey

Luncheon meetings with the CEO and the executives are held to promote communication between employees and management. Employees and executives can share ideas or problems about the company, or discuss any other questions in a relaxed atmosphere. Through the ideas and suggestions exchanged at the meetings, POSCO ENERGY has shown positive improvements such as opening a daycare center, providing special lectures on dating for singles, and celebrating employees' anniversaries. The ideas suggested during the meetings have been gathered and evaluated to continuously improve the welfare of employees.

Certified as Family-friendly Company / POSCO ENERGY runs various family-friendly programs such as support for childbirth and childcare, leisure activities, club activities, healthcare, weekend farms, and summer various places. In December 2012, the company was certified as a familyfriendly company by the Ministry of Gender Equality and Family, for its successful implementation of family-friendly policies, which improved the quality of employees' lives and the productivity of the company through a work-life balance.

Employee Welfare

POSCO ENERGY enforces the statutory welfare and benefits program and operates various welfare and benefit programs for all employees to improve their happiness and health.



Retirement Pension / To ensure the stable management of employees' severance pay, POSCO ENERGY introduced a retirement pension program in December 2011. The program sets the retirement age at 60, and guarantees the highest level of job security. Moreover, the company re-hires some of the employees scheduled to retire for a certain period of time considering their expertise and necessity.



POSCO ENERGY will bring innovation to our work processes and procedures by building a smart work infrastructure so that employees can achieve a balance between work and private life. The company will also strive to become a trusted company by improving the work productivity of employees and their quality of life satisfaction.

Promoting a Labor-Management **Culture of Appreciation**



POSCO ENERGY has exchanged the "100 Appreciation Book" at the salary negotiation table to create a labor-management culture of trust, harmony, and win-win cooperation. The "100 Appreciation Book" contains 100 items to appreciate, identified by both the CEO and the head of the labor union during the salary negotiation processes, which solidifies the mutual trust between the management and labor.

Establishing Labor-Management Relations

In regard to human rights and labor issues, POSCO ENERGY stipulates the continuous stability of labor-management relations in the internal collective agreement and ethical standards, prohibiting discrimination, forced labor, and child labor. POSCO ENERGY has established a systematic grievance resolution system to listen to the voices of employees and to promptly address their difficulties.

Grievance Consultation Office

POSCO ENERGY operates a labor-management council and a grievance committee at each operational site to discuss almost every item related to labor-management cooperation including employees' grievances, improvement of work environments, healthcare programs, and salary system enhancement. Through online or face-to-face meetings, employees can make a suggestion or report a grievance to the company on the problems related to work duties or family issues such as childcare. The grievance committee at each operation deals with human rights complaints and employee grievances, which are immediately handled by the applicable division heads through consultations. The committee guarantees the confidentiality of the reported grievances, and when it is impossible to handle the issue immediately, the company does its utmost to address the grievance at the guarterly labor-management council.

POSCO ENERGY regularly conducts collective bargaining with the labor union in regard to wages and agreements to build a cooperative relationship and form close ties with the labor union. As for important company decisions or issues directly connected to the working conditions of employees, the company frequently consults with the labor union to reflect their opinions in the decisions. Besides the labor-management council, the company holds monthly meetings to review grievances and difficulties, and to ensure a close dialogue between labor and management.

Appreciation Campaign

POSCO ENERGY's appreciation sharing movement 'Appreciation for Energy of Happiness' meaning to share hearts, thank right now, and love together. Based on the sincere interaction, it contains a concept of 'Let me be thankful first to share love with colleagues, the company, and local communities and spread the energy of happiness."

In-House Appreciation Sharing Broadcasting

The appreciation sharing broadcasting started in May 2013 to start every day with a sense of gratitude. Staff in charge of broadcasting read stories of appreciation every day at the end of office hours for employees to wrap up their day with smiles.

Easy Thanks Planet

To invigorate the appreciation sharing activities and help employees to internalize the sense of appreciation, the company has introduced the Easy "Thanks Planet" (an online appreciation sharing system) in December 2013, which can be accessed anytime, anywhere. The system includes appreciation notes, texts, letters, and other appreciation activities such as complimenting others and appreciation contents, contributing to creating a culture of appreciation and encouragement among employees.

Labor-Management Council (Grievance Committee) and

Dialogue between Labor and Management



In-house Appreciation Sharing Broadcasting

Safety and Health

Safety and Health System

Recognizing safety and health as the top priority and a basic value, POSCO ENERGY has established and operates a safety and health system to prevent industrial incidents and create a pleasant workplace. With the acquisition of KOSHA18001, the company has continually improved the system, leading a culture of safety and ensuring the health of employees.

| Operational Goals | Maximizing profits and securing a foundation for growth through optimization of operations | | | | | |
|-------------------------|---|--|--|--|--|--|
| Implementation Goals | Creating accident | -free operational sites by pu | itting safety first | | | |
| Implementation Plans | Improve and standardize the level of safety and health at operations | Establish autonomous safety management focusing on the line organization | Felt leadership that complies with principles and procedures | | | |
| | Establish a company-level safety and health management system Operate a support program for safety and health management at operations Establish a company-level safety communication network | Define roles and responsibility for safety by position Establish performance analysis processes by department Operate an emergency response system | Increasing exemplary actions of position-holders on safety issues Reinforcing the Safety Leadership Training Identifying potential risks and mitigating such risks | | | |

Operation of the Occupational Safety & Health Committee

POSCO ENERGY established the Occupational Safety & Health Committee for the safety and health of employees and preventing occupational incidents. The Committee meetings are held every guarter, to consult and discuss issues related to safety and health. In addition, the Voluntary Safety Committee is held every month for the heads of plants and position-holders, to encourage positionholders to voluntarily participate in safety measures and strengthen their mindset on safety issues.

Activities to Improve Safety

Near-Miss Activities



An Autonomous Safety Management



A Risk Top-10 Improvement Activity

POSCO ENERGY conducts Near-Miss Activities with all employees to discuss incident cases at the worksites. The activities are aimed to minimize risk factors of such incidents and firmly establish a safe operating system. Moreover, the company encourages study groups to register safety activities in real time so that employees can share the activities. In 2013, a total of 123 cases were registered. Those who identify the best Near Misses are selected and rewarded on a monthly basis and their cases are through weekly news.

Risk Top 10

The Top-10 Risk System assesses the risks of the accident-prone power generation facilities, identifies the top 10 improvement tasks and conducts improvement activities to prevent disasters. The selected cases of improvement are shared at the Voluntary Safety Committee held monthly and spread throughout the company.





The Highest Rating of P for PSM





Emergency Drills

Safety-Health Education

The company provides employees with safety education programs by sector, including statutory education, in-house education, and fire drills. To raise the awareness and competency of employees on safety, the company also holds workshops, regular and special safety education programs, and conducts periodical risk evaluations of processes and facilities as well as emergency drills.



Statutory Education

- Statutory manager education Regular education for all emplovees
- Safety education for supervisors Safety education for new employees
- Special education

Coexistence & Cooperation Programs

POSCO ENERGY operates coexistence & cooperation programs to train partner companies stationed in the operation with safety knowledge by providing them with safety education by safety experts. In addition, the company also conducts a joint safety inspection with the partner companies to prevent safety incidents by complying with the safety regulations and inspecting riskprone machinery and equipment.



Industrial



Absenteeism



Safety Management Performances

With the systemic operation of the safety and health management system, POSCO ENERGY has realized accident and disaster-free power plants while successfully positioning the company as a leading company in safety and health management. As a result of such endeavors in identifying issues regarding the 12 tasks on process safety management (PSM), the company was awarded the highest rating of 'P' for PSM in 2014. POSCO ENERGY will continue improving the activities for safety through raising employee awareness of safety, safer installation of processes and facilities, and optimization of safety systems.

Rating P for PSM

PSM is a safety management evaluation system conducted by the Ministry of Labor and Employment to assess industrial sites in the metropolitan area. Rating P is the highest level for PSM which is only given to 5-10% of the sites subjected to the evaluation.



In-House Education

- Special education on safety and health
- Safety and health education for employees of partners
- Education before harmful and dangerous work
- Company's own safety education

Fire Drills

- Fire drills for all employees
- Drills to put out fires in the early stage
- Emergency drills



A Starting Ceremony for Coexistence and Cooperation Programs

Customer Satisfaction

Strengthening Customer Services

Improving the Voice of Customer Channels

POSCO ENERGY collects VOCs via various channels following the VOC receiving and handling process. The company promptly responds to them and VOC results are provided to customers with feedback in documentation. VOCs are regularly analyzed and significant VOCs are shared throughout the company. POSCO ENERGY has continually improved the VOC handling process to provide customers with a better service.

Real-Time Technical Support

Improving the Functions of the 24/7 Technical Support Center / POSCO ENERGY established a remote-access system and the basic hardware in the Pohang fuel cell manufacturing plant in April 2009 and had provided remote-operation and technical support through the manufacturer of fuel cell, FCE. However, we built a 24/7 technical support center in February 2013 and have trained technical experts through collaboration with the manufacturer and technology transfer programs. Currently, the company's 24/7 technical support center provides customers with remote-operation services for 39 out of 49 fuel cell operated in Korea while offering real-time customer services such as emergency response, repairs and maintenance support, and sustaining of optimal operational status.

Framework of Around-the-Clock Technical Support and Emergency Response



Measures to Strengthen Product and Customer Safety

- Obtained an explosive product safety certification in the USA
- Obtained both IEC-Ex (International Certification) and Korean certification for each component
- Obtained an UL certificate to expert the EBOP manufactured by POSCO ENERGY to the USA

dispersed power generation as an optimal solution to social conflicts regarding power generation such as the conflict over the transmission cable towers in Miryang, the company has held seminars on fuel cell with officials from applicable industries. In line with the government's plan to expand the dispersed power generation of the country up to 15% of the total power generation, as stated in the government's second basic energy plan, the seminars are expected to bring fuel cell to the center of attention.

Seminars on Fuel Cell for Buildings / As POSCO ENERGY suggests fuel cell for buildings for

Seminars with Fuel Cell Safety Managers / POSCO ENERGY has held seminars on fuel cell for the Ministry of Labor's Incident Prevention Center and the Korea Occupational Safety and Health Agency to raise their understanding of fuel cell and prevent safety incidents. The seminars allowed the participants to mutually review each other's safety management points of fuel cell and are expected to help establish optimized inspection criteria for fuel cell in the near future.



Operating the 24/7 Technical Support Center



Operation of the Hwaseong Office POSCO ENERGY opened the Gyeongin Service Center in May 2012, expanding the service range to Pohang and Incheon and reducing response time for fuel cell in the Gyeongin area from five hours to one hour. To strengthen the service organization, the company opened the Hwaseong Office that serves as a service hub in the Jungbu area, thereby closely and promptly responding to large-scale worksites of fuel cell such as the Gyeonggi Green Energy. With the opening of the Hwaseong Office, the company established a foundation to build regional service systems and became able to focus on stable operation of fuel cell by region, improvement of customer satisfaction and operation rate. Moreover, the company plans to build a web portal system for customer service and supply chain for prompt material supply, striving to win credibility with the existing and potential customers.

Gyeongin Region

Incheon POSCO ENERGY

Dangjin GS EPS

An Opening Ceremony of the Hwaseong Office

Gunsan Natura 🗄 Power

Technology Education Tailored to Product Type

As fuel cell systems are more diversified and customers accordingly request different education programs, POSCO ENERGY has expanded the customized technology education for its customers. In 2013, a total of nine technical education programs were provided to satisfy the needs of customers (one technical seminar, seven theoretical courses on fuel cell, and one field education program). The technical seminar not only provided technical training on fuel cell but also allowed attendees to share information on industrial trends, improvements of related policies, and future business visions. The company is in the process of developing more diversified programs to meet the expectations of customers and is planning to establish a technology education system with founding fuel cell technology certifications and a technology education center.

Strengthening the Service Organization





The Technical Seminar

Shared Growth with Suppliers

Establishment of Reliable Trade Relations

POSCO ENERGY evaluates and selects suppliers following fair procedures and criteria. The company also strives to build fair trade relations to conclude transparent contracts with suppliers.

Adoption of the Four Guidelines of Fair Trade and Standard Subcontractors Agreement

POSCO ENERGY has voluntarily signed a fair trade and shared growth agreement with 80 primary suppliers and recommended the primary suppliers to sign the same contract with secondary suppliers, thereby spreading a fair trade culture. Accordingly, the company has adopted and complied with the four guidelines of fair trade advised by the Fair Trade Commission while applying the standard subcontractor agreement to protect suppliers from unfair business practices.

Transparent Contract

The company carries out fair electronic bidding processes through its e-Procurement system to ensure transparency in the process of signing contracts. In addition, POSCO ENERGY operates the Subcontracting Evaluation Committee at least once a month to enhance the transparency of the whole process from bidding to contracting, such as evaluating the compliance of prohibited behavior, including oral ordering or unfair curtailment of prices, in order to create fair trade relations with suppliers.

Fairness in Selecting and Evaluating Suppliers

POSCO ENERGY applies the supplier selection and evaluation standards, stipulated in the purchasing regulation, and carries out the new supplier registration and bidding process without partiality through POSCO Family's SRM (Supplier Relationship Management). POSCO ENERGY's evaluation criteria include supplier's codes on human rights or its fulfillment of corporate social responsibility in terms of environment and safety. The company will continue ensuring the fairness in the evaluation process and developing cooperative relations with suppliers.

Various Support Programs for Suppliers

POSCO ENERGY operates various support programs for small and medium-sized suppliers such as benefit sharing programs, and purchasing their products with 100% cash. The company also provides shared growth programs in various areas including finance, technology, and manpower.



2013 KRW 783 million 2012 KRW 556 million 2011 KRW 345 million

Benefit Sharing

POSCO ENERGY operates the Benefit Sharing system of POSCO Family which allows the company to cooperate with SMEs to carry out joint tasks such as development and localization of technology and share financial performance. The company reviews the feasibility of the suggested projects from the suppliers or field employees and takes corresponding actions with the suppliers. It pays the price of the prototype, and after the performance has been proved for a certain period, POSCO ENERGY shares the benefits with the suppliers in various ways such as cash reward, unit price compensation, or sales compensation through a private contract.





Activities of Win-Win Growth Support Team

Since 2010, POSCO ENERGY has operated the Win-Win Growth Support Team to build trust with suppliers and increase the value of the company. Every month, the company selects one executive or a pair of executives to send to SMEs for six months to provide them with columniation and support services from business consultations in personnel and finance to safety and QSS consultations. To offer practical and effective support, POSCO ENERGY plans to learn more about the areas that suppliers are interested in and expand the targeted beneficiaries to secondary suppliers.

Financial Support

POSCO ENERGY runs a financial aid program that offers loans with an interest rate to suppliers through the POSCO Family Shared Growth Fund. Participating in the Industrial Innovation 3.0 Campaign of the Ministry of Trade, Industry and Energy, the company raises funds to support SMEs, subcontractors of the primary and secondary suppliers, with business consultations and purchase of equipment to improve their productivity.

Technical Support

POSCO ENERGY pays for some of the expenses for SMEs when the company and the suppliers jointly apply for a patent. Since 2013, the company has supported suppliers with their registration fee for the technology escrow system which is designed to protect their technology and have paid for five technology escrow cases for the suppliers. In addition, technologically cooperating with SMEs that have new technology has allowed POSCO ENERGY to improve its technology while helping the SMEs develop new markets. Such endeavors have been recognized by the POSCO group. POSCO ENERGY and supplier received the best award for technological cooperation at the 2013 POSCO Family Partners Day event.

Education and Human Resources Support

POSCO ENERGY provides suppliers with various collective education and e-learning, free of charge, through POSCO Group's National Human Resource Development Consortium. In addition, technical education programs are provided to suppliers at the Innovation Support Center of the Incheon Plant. The company plans to help suppliers recruit talented individuals by increasing support for their participation in job fairs.

Win-Win Growth Support Team

100% Cash Payment on Purchase

POSCO ENERGY pays for the purchases from SMEs in cash, and the payment is made twice a week. When an SME submits the documentary evidence in advance, the payment is completed no later than five days after the products are received.



POSCO ENERGY Receives an Award on Partners Day

Social Contribution

POSCO ENERGY's Social Contribution in 2013 at a Glance

POSCO ENERGY has been active in social contributions especially for local areas to realize the value of 'Energy for a Better World'

CO₂ reduction 48,067kgCO2

Tree planting effects

8,583trees

Energy Reduction Costs

KRW **14,732,000** per year

Project of Sharing Love with Energy of Hope

* based on the support for 40 homes and five facilities

By Area (KRW)

| Environment & International | 16,600,000 |
|-----------------------------|---------------|
| Community | |
| Academy and Education | 1,566,000,000 |
| Social Welfare | 1,168,593,850 |
| Others | 22,940,000 |

Completion rate of the College Student Volunteer Corp (average of the first and second batches)

* Completed when they attend over 80% of the 20-week activities

Total hours of talent sharing by the College Student Volunteer Corp (first and second batches)

4-600

Satisfaction of Community Child Centers on the project (average for the first and second projects)

70% 30% Very satisfied Satisfied

By Fund (KRW) Company's Contributions 2,184,950,560 Development Fund 466,000,000 123,183,290 1% Sharing Fund

2,774,133,850 KRW

Volunteer Hour of Employees Total **27,867** hours (28.9 hours/employee)

Performances

projects with th

INPUT

Social Contribution Costs

A story of change | A thank you letter from a North Korean refugee after being provided with an opportunity to participate in the 'Sharing Love with Energy of Hope' program

Hello! Thank you so much for creating such beautiful classrooms. Thanks to your help, I can have some good memories and grow with a positive mind at this school. I know that this school has been built by many of you from POSCO ENERGY through your sweat and hard work. I cannot thank you enough for that. Everything in this school has been placed and organized well. The classrooms are spacious, beautiful, and bright. I am forever grateful for your support.

> **POSCO ENERGY will continue delivering** 'Energy for a Better World' to local communities.



The slogan for POSCO ENERGY's social contribution activities selected through an employee contest.



Awarding Companies Contributed to Baise Green Climate Fund (GCE)



Installation of a Solar Powergenerator at a Welfare Center in Gwangyang

Sharing Love with Energy of Hope

Since 2012, the company has carried out the energy-efficiency improvement project for houses in the local communities the power plant. Along with the local government, the company identifies the energy-deprived (those who spend over 10% of their income for light and heat expenses) and improve the energy efficiency of their aged houses. In terms of welfare, POSCO ENERGY helps them to reduce energy costs which improves their financial situation and also reduces greenhouse gas emissions which allows the company to share green values with the local communities.

Performance in 2013

| Title | Sharing Love with Energy of Hope |
|-----------------------|---|
| Target | Energy poor (mostly beneficiaries of bas |
| Region | Seo-gu, Incheon in 2012 \rightarrow Expanded t |
| Process | Application receipt (recommendation of beneficiaries → Planning for constr windows, insulation work, replaceme DIY furniture, etc.) → Post-energy dia |
| Description | Energy efficiency improvement for ag of boilers, floor construction, wallpap % Urgent improvement works are inc Replacement of lighting to LED lightir Installed a solar power generator of 2 |
| Implementation Period | All year round (construction in the first |
| Achievements | Beneficiaries: 5 welfare centers and 4 Effects: energy cost reduction (KRW1 Satisfaction of the beneficiaries: very setup) |

Social Contribution Strategy

POSCO ENERGY has established a system of social contribution and volunteer activities to accomplish the value of 'Energy for a Better World' With the system established, the company has been active in contributing to society, especially to local communities.

Social Contribution Directio Sloga





| ition Framework | | | | | | |
|---|--|--|--|--|--|--|
| Communication with Local Sharing Green Value | | | | | | |
| | Energy for a | Better World | | | | |
| Sharing Love with Energy of Hope Energy welfare project for the energy needy the power plants | | | | | | |
| Sharing Saturday | BEST Voluntee Themed Volunteer Activity | ring Activities Energy Volunteer Activity | Family Volunteer Activity | | | |
| e asic Company's traditional volunteer activity with a long history "Basic" volunteer activity of the company that every employees should participate in by division or group | teisure-style volunteer activity for employees, their families, and stakeholders "Entertaining" volunteer activity with various experimental programs | Strategic • Volunteer activity linked to the signature CSR programs with the management • "Strategic" volunteer activity related to the energy industry | ogether POSCO Family joint volunteer activity Joint volunteer activities carried out "together" with the partner companies | | | |

• "Ba activ



The Sharing Love with Energy of Hope program with the Management

sic living allowance, households of the near poverty group)

to Seo-gu, Incheon, Seoul, and Gwangyang in 2013

n of beneficiaries by local governments and welfare centers) \rightarrow On-site inspection \rightarrow Selection ruction/renovation \rightarrow Pre-energy diagnosis \rightarrow implementation of project (replacement of ent of aged boilers, etc.) \rightarrow Employee volunteering (wallpaper work, arranging loads, making agnosis \rightarrow Performance report

ged houses: replacement of windows to double pane windows, insulation work, replacement per and floor work, and so forth.

cluded such as water-proof construction or securing storage space if necessary ng (newly added project in 2013, also applied to the beneficiaries in 2012) 20kW at a welfare center (newly added project in 2013)

and second half years)

40 energy poor households 14,732,303/year), CO2 reduction (48,067kg/year, equivalent to planning 8,583 trees) satisfied (76%), satisfied (24%)

Community Child Center that Brightens the World

POSCO ENERGY launched a new social contribution program to support children of energy-deprived households with human and material services. The company sends the College Student Volunteer Corp to Community Child Centers located within 5 km from the power plants so that the college students can help with the children's studying as mentors. For the centers to have an academic setting, the company also supports air conditioning and heating expenses, educational materials, and renovation of their Community Child Center. In addition, the company's regional operation supports children of the needy with scholarships and educational materials for schools, actively being engaged in such activities to contribute to local communities by helping the children grow as talented individuals.



A Starting Ceremony of the College Student Volunteer Corp

Wall Painting Volunteering for Improving A Disbanding Ceremony of the College the Environment of the Community Student Volunteer Corp Child Center

Performance in 2013

| Title | Community Child Center that Brightens the World | Community Child Center of Warmth |
|-------------|--|--|
| Target | Community Child Centers (10 centers) and the cer | nters' children (around 250) in Seo-gu, Incheon |
| Purposes | To motivate the children of the centers to study and improve their learning abilities by setting the College Student Volunteer Corp as role models | To improve the physical environment and support education contents to create an academic setting at the children centers |
| Period | First half year (March-August), second half year (September-February) | All year round |
| Description | The College Student Volunteer Corp's tutoring and guiding of a small group of children 1. Dispatching a batch of college student mentors (50 students each time) 2. Tutoring children (at least once a week) 3. Guiding children's special activities (once every two months) 4. Visiting the occupational experience park for children's career exploration | Physical resources to create an academic setting at the centers 1. Providing support to cover the center's air conditioning and heating expenses along with applicable equipment 2. Purchase of on-off life educational contents and books 3. Renovation work to improve Community Child Center |

- Community Child Centers: Protect the children of the needy after school and run educational programs for them Roles POSCO ENERGY: Project supervision
 - (planning for the project, implementation of the project, and follow-up management)
 - Incheon branch of Children Foundation: Recruit and manage college student volunteers,
 - implement the project
 - Incheon Seo-gu office: recommend Community Child Centers

| Performances | Batch | No. of Volunteers | Completion rate | Volunteering hours | Satisfaction of the Community Child Centers | Reputation of the company for the college student volunteers |
|--------------|-----------------|----------------------|-----------------|-----------------------|--|--|
| | 1 st | 50 | 98% | 2,252hours | Very satisfied (50%) Satisfied (50%) | Better than before (92.3%) The same (7.7%) |
| | 2 st | 50 | 92% | 2,348hours | Very satisfied (90%) Satisfied (10%) | Better than before (88.1%) The same (11.9%) |

Total Volunteer Hours per Employee



34.2hours 2011 28.5hour 2010 24.2hours





1% Sharing Fund

The 1% Sharing Fund Campaign started with the management of POSCO in October 2011 has spread to all employees of POSCO Family companies since April 2013. Accordingly, POSCO ENERGY has combined the Bright World Fund, which was run with donations through salary deductions, with the 1% Sharing Fund. More than 90% of the employees of the company are currently partaking in the campaign and the company also donates a matching grant to the 1% Sharing Fund to develop a donation culture jointly participated by labor and management. The 1% Sharing Fund Committee consisting of employee councils is run for each operation to discuss and approve the use of the fund. With such fund, the company has successfully realized "1% sharing" by helping those who are in need.



A Company-wide Campaign of 1% Sharing Fund

Participation of Employees

POSCO ENERGY is providing not only the company itself but also its employees with the opportunities to understand the local communities, and employees are actively participating in the

POSCO ENERGY operates volunteering programs divided into four categories for employees to return support and love to local communities

Sharing Saturday / Employees participate in Saturday Themed Volunteer Activity / It is a leisure-style, volunteering by division or group working with 30 entertaining volunteer activity for employees, their volunteer organizations near the company's operations. families, and stakeholders to partake in together.

Energy of Hope, conducted with the management.



Energy Volunteer Activity / It is a volunteer activity Family Volunteer Activity / It is a POSCO Family linked to the signature CSR program, Sharing Love with joint volunteer activity which allows interactions with other family companies.

Financial Information

Assets

Liabilities

Equity

APPENDIX

/ Financial Information / Sustainability Management Performance Data ⁷ Corporate Governance of Affiliates / GRI G4 & ISO26000 Index /Independent Assurance Report / UN Global Compact / Membership in Associations

Statements of Financial Position (KRW) Classification Current assets - Quick assets - Inventory assets Non-current assets - Invested assets - Property, plant and eq - Intangible assets - Other non-current ass Total Assets Current liabilities Non-current liabilities Total liabilities Equity capital Hybrid capital equity Capital surplus Capital adjustments Other capital compone Retained earnings Total equity

Total liabilities and equity

| tatements of Income (KRW) | | |
|--|--------------------------------------|--------------------------------------|
| Classification | 15 th (December 31, 2013) | 14 th (December 31, 2012) |
| Revenue | 2,901,117,427,200 | 2,805,208,006,510 |
| Cost of sales | 2,587,867,176,850 | 2,452,843,752,945 |
| Gross profit | 313,250,250,350 | 352,364,253,565 |
| Selling, general and administrative expenses | 75,078,164,266 | 77,567,683,380 |
| Dperating income | 238,172,086,084 | 274,796,570,185 |
| inancial income (expense) | (23,464,908,172) | (47,641,832,725) |
| Other net non-operating income (expense) | (42,780,605,340) | (16,183,481,120) |
| ncome before income taxes | 171,926,572,572 | 210,971,256,340 |
| ncome tax expenses | 27,094,388,057 | 33,211,703,506 |
| Net income | 144,832,184,515 | 177,759,552,834 |
| Other comprehensive income (expense) | 11,980,661,101 | (793,040,540) |
| Total comprehensive income (expense) | 156,812,845,616 | 176,966,512,294 |
| arning per share | 3,067 | 4,257 |
| | | |

| | 15 th (December 31, 2013) | 14 th (December 31, 2012) |
|----------|--------------------------------------|--------------------------------------|
| | 690,606,570,359 | 803,807,990,034 |
| | 587,929,091,621 | 669,550,833,934 |
| | 102,677,478,738 | 134,257,156,100 |
| | 3,331,362,364,851 | 2,511,962,947,247 |
| | 384,702,471,392 | 346,643,785,373 |
| luipment | 2,837,116,715,385 | 2,039,430,854,645 |
| | 15,800,881,459 | 22,109,603,786 |
| ets | 93,742,296,615 | 103,778,703,443 |
| | 4,021,968,935,210 | 3,315,770,937,281 |
| | 678,983,002,945 | 691,825,301,303 |
| | 1,754,837,861,785 | 1,682,861,657,694 |
| | 2,433,820,864,730 | 2,374,686,958,997 |
| | 225,974,030,000 | 225,974,030,000 |
| | 498,468,200,000 | - |
| | 364,627,534,005 | 364,627,534,005 |
| | (3,718,315,057) | (3,718,315,057) |
| nts | 11,808,384,195 | - |
| | 490,988,237,337 | 354,200,729,336 |
| | 1,588,148,070,480 | 941,083,978,284 |
| | 4,021,968,935,210 | 3,315,770,937,281 |
| | | |

Statement of Changes in Equity (KRW)

| Classification | Equity Capital | Hybrid Capital Equity | Capital Surplus | Capital Adjustments | Other Capital Components | Retained Earnings | Total |
|--|-----------------|--------------------------|-----------------|------------------------|-----------------------------|----------------------|-------------------|
| January 1, 2012 (At the beginning of the previous period) | 200,000,000,000 | - | 190,497,007,247 | (3,746,987,570) | 102,945,337 | 177,131,271,705 | 563,984,236,719 |
| Total comprehensive | income | | | | | | |
| Net profit | - | - | - | - | - | 177,759,552,834 | 177,759,552,834 |
| Actuarial gain (loss) on post defined benefit pension plans | - | - | - | - | - | (690,095,203) | (690,095,203 |
| Gain and loss on valuation of available-for-sale securities | - | - | - | - | (102,945,337) | - | (102,945,337 |
| Total | - | - | - | - | (102,945,337) | 177,069,457,631 | 176,966,512,294 |
| Comprehensive incor | me (expense) | | | | | | |
| Transaction with shareholders: | 25,974,030,000 | - | 173,862,848,760 | - | - | - | 199,836,878,760 |
| Paid-in capital increase | - | - | 267,677,998 | (74,308,820) | - | - | 193,369,178 |
| Others | - | - | - | 102,981,333 | - | - | 102,981,333 |
| December 31, 2012 (At the end of the previous period) | 225,974,030,000 | - | 364,627,534,005 | (3,718,315,057) | - | 354,200,729,336 | 941,083,978,284 |
| January 1, 2013 (At the beginning of the period) | 225,974,030,000 | - | 364,627,534,005 | (3,718,315,057) | - | 354,200,729,336 | 941,083,978,284 |
| Total comprehensive | income | | | | | | |
| Net profit | - | - | - | - | - | 144,832,184,515 | 144,832,184,515 |
| Actuarial gain (loss) on post defined benefit pension plans | - | - | - | - | - | 172,276,906 | 172,276,906 |
| Gain and loss on valuation of available-for-sale securities | - | - | - | - | 11,808,384,195 | - | 11,808,384,19 |
| Total comprehensive income (expense) | - | - | - | - | 11,808,384,195 | 145,004,461,421 | 156,812,845,616 |
| Transaction with sha | reholders: | | | | | | |
| Hybrid capital equity issued | - | 498,468,200,000 | _ | - | - | - | 498,468,200,000 |
| Hybrid capital equity dividends | - | - | - | - | - | (8,216,953,420) | (8,216,953,420 |
| December 1 2013 (At the end of the period) | 225,974,030,000 | 498,468,200,000 | 364,627,534,005 | (3,718,315,057) | 11,808,384,195 | 490,988,237,337 | 1,588,148,070,480 |

| Statements of Cash Flows (KRW) | | |
|---|--------------------------------------|--------------------------------------|
| Classification | 15 th (December 31, 2013) | 14 th (December 31, 2012) |
| I. Net cash provided by operating activities | 276,475,241,715 | 387,997,204,736 |
| 1. Net cash provided by operating activities | 396,428,072,850 | 468,238,649,193 |
| a. Net income | 144,832,184,515 | 177,759,552,834 |
| b. Adjustments | 225,077,008,788 | 233,289,044,015 |
| c. Changes in assets and liabilities resulting from operations | 26,518,879,547 | 57,190,052,344 |
| 2. Interest received | 3,422,322,899 | 3,803,236,928 |
| 3. Dividend received | 3,322,554 | - |
| 4. Interest paid | (73,846,620,438) | (70,763,415,879) |
| 5. Income taxes paid | (49,531,856,150) | (13,281,265,506) |
| II. Net cash used in investing activities | (846,542,007,453) | (560,285,150,347) |
| 1. Cash inflows from investment activities | 3,921,149,323 | 4,498,339,166 |
| 2. Cash outflows for investment activities | (850,463,156,776) | (564,783,489,513) |
| III. Net cash provided by financing activities | 567,390,419,328 | 160,375,019,112 |
| 1. Cash inflows from financing activities | 1,177,183,884,806 | 508,746,209,277 |
| 2. Cash outflows for financing activities | (609,793,465,478) | (348,371,190,165) |
| IV. Effects of exchange rate changes on cash and cash equivalents | (315,280) | - |
| V. Net increase (decrease) in cash and cash equivalents (I+II+III+IV) | (2,676,661,690) | (11,912,926,499) |
| VI. Cash and cash equivalents at the beginning of year | 167,247,781,707 | 179,160,708,206 |
| VII. Cash and cash equivalents at the end of year | 164,571,120,017 | 167,247,781,707 |

Sustainability Management Performance Data

Economic Performance Indicators 2011 2012 2013 Category 12,809,742 15,791,978 Generation (MWh) Total 16,032,516 Incheon LNG Combined Cycle Power Plant 10,591,310 13,612,486 13,685,136 Gwangyang Off-Gas Combined Cycle Power Plant 2,184,832 2,138,844 1,993,829 Pohang Off-Gas Combined Cycle Power Plant --304,002 Fuel cell and others 33,600 40,648 49,549 Transmission (MWh) 12,339,542 15,424,543 15,628,532 Fuel cell production (MW) BOP 25.4 42.0 49.3 Stack 12.6 36.4 38.2 48.5 54.3 115.6 Accumulated supply of fuel cell (MW) Government subsidy* (KRW million) 6,689 8,675 4,989 R&D** Manpower status (person) 53 69 65 98 183 Amount (KRW 100 million) 161

* Calculated on the basis of the amount of renewable energy development difference funding and government subsidies for national projects ** Counted on the basis of the business report

Environmental Performance Indicators

| Category | | 2011 | 2012 | 2013 |
|--|-------------------------|---------------|---------------|---------------|
| Fuel consumption (Nm ³) | LNG | 1,967,934,125 | 2,540,069,749 | 2,603,784,684 |
| | BFG | 5,068,025,525 | 4,834,404,296 | 5,091,653,614 |
| | COG | 25,103,776 | 51,319,218 | 58,652,766 |
| | FOG | - | - | 110,983,038 |
| Energy consumption (TJ) | | 104,784 | 128,403 | 131,819 |
| Energy consumption intensity (GJ/MWh) | | 8.18 | 8.13 | 8.42 |
| GHG emissions (tCO ₂) | Total | 8,895,004 | 9,863,100 | 11,048,184 |
| | Scope1 | 8,875,412 | 9,849,384 | 11,035,778 |
| | Scope2 | 19,592 | 13,716 | 12,406 |
| Water consumption (ton) | | 2,261,989 | 2,080,858 | 2,079,558 |
| Water consumption intensity (ton/MWh) | | 0.18 | 0.13 | 0.13 |
| Discharge water discharged (ton) | | 1,367,166 | 1,427,948 | 1,223,459 |
| Discharge water discharged intensity (ton/MWh) | | 0.11 | 0.09 | 0.08 |
| Waste | Waste generated (ton) | 721.0 | 1,126.5 | 1,202.1 |
| | Waste recycled (ton) | 211.3 | 427.0 | 538.0 |
| | Waste recycled rate (%) | 29.3 | 37.9 | 44.8 |
| Environmental investments (KRW million) | | 24,122 | 7,560 | 12,818 |

* The reporting range for the energy and water consumption was expanded to the Incheon, Gwangyang, and Pohang operations and last year's data was applied retroactively.

** The reporting range for the energy and water consumption intensity includes the Incheon and Gwangyang operations

| Social Performance Indicator | rs | | | |
|---------------------------------------|--|-------|-------|-------|
| Category | | 2011 | 2012 | 2013 |
| Total number of employees | | 688 | 861 | 1,010 |
| By region (person) | Seoul | 138 | 147 | 206 |
| | Incheon | 266 | 326 | 320 |
| | Pohang | 241 | 318 | 361 |
| | Gwangyang | 30 | 56 | 107 |
| | Overseas | 13 | 14 | 16 |
| By gender (person) | Male | 633 | 784 | 909 |
| | Female | 55 | 77 | 101 |
| By job category (person) | Regular job total | 443 | 577 | 636 |
| | Regular job male | 397 | 501 | 556 |
| | Regular job female | 46 | 76 | 80 |
| | Specialized job total | 214 | 252 | 312 |
| | Specialized job male | 213 | 251 | 310 |
| | Specialized job female | 1 | 1 | 2 |
| By employment type (person) | Regular employees | 657 | 829 | 948 |
| | Contract workers | 31 | 32 | 62 |
| Education (person) | Average education hours (hr/employee) | 110.0 | 132.0 | 81.8 |
| | Total education expenses (KRW 100 million) | 10.8 | 10.9 | 8.9 |
| Happiness index (point) | | 73.4 | 75.1 | 81.4 |
| Rate of job return after materni | ty leave (%) | 100 | 100 | 100 |
| Turnover rate (%) | | 2.5 | 1.7 | 2.3 |
| Membership rate of labor union | n (%) | 69 | 65 | 57.7 |
| Employees scheduled to retire | Regular job within 5 years | 1.4 | 2.7 | 5 |
| by job type (%) | Regular job within 10 years | 3.2 | - | 20 |
| | Specialized job within 5 years | 3.8 | 0.4 | 7 |
| | Specialized job within 10 years | 6.3 | 0.4 | 23 |
| Absenteeism rate (%) | | 0 | 0.97 | 0.86 |
| Benefit Sharing Cost (KRW milli | on) | 345 | 556 | 783 |
| Average volunteer hours (hr/employee) | | 28.5 | 34.2 | 28.9 |

Corporate Governance of Affiliates

| Affiliated Company | Share | Affiliated Company | Share |
|---------------------------------|--------|---|--------|
| PSC Energy Global Co., Ltd. | 100% | Fifth Combined Heat and Power Plant LLC | 30% |
| POSCO E&E | 100% | Gyeonggi Green Energy | 19% |
| Techren Solar, LLC | 99.99% | Fuel Cell Energy, Inc | 14.99% |
| PT. KPE | 90% | eNtoB Co., Ltd | 3.95% |
| Tamra Offshore Wind Power Plant | 64% | | |

GRI G4 Guidelines (Comprehensive) & ISO26000 Index

| GRI G4 | | | ISO26000 | Page Remark |
|------------------------------|--------|---|---------------------|------------------|
| 1. General | Standa | rd Disclosures | | |
| a. Strategy | G4-1 | Statement from the most senior decision-maker of the organization about the relevance of sustainability to the organization and its strategy | 4.7, 6.2, 7.4.2 | 2, 3 |
| and Analysis | G4-2 | Description of key impacts, risks and opportunities | | 32-35, 38-39 |
| b. Organization | G4-3 | Name of organization | 6.3.10, | 6, 7 |
| Profile | G4-4 | Primary brand, products, and services | 6.8.5, 7.8 | 6, 7 |
| | G4-5 | Location of headquarters | | 6, 7 |
| | G4-6 | Number of countries where the organiation operates, and names of countries where either it has significant operations or that are specifically relevant to the sustainability topics covered in the report | _ | 6, 7 |
| | G4-7 | Nature of ownership and legal form | _ | 71 |
| | G4-8 | Markets served | | 6, 7 |
| | G4-9 | Scale of the organization | | 6, 7 |
| | G4-10 | a. Total number of employees by employment contract and gender b. Total number of permanent employees by employment type and gender c. Total workforce by employees and supervised workers and by gender d. Total workforce by region and gender e. Explanation of whether a substantial portion of the organization's work is performed by workers who are legally recognized as self-employed, or by individuals f. Any significant variations in employment numbers (such as seasonal variations in employment) | - | 71 |
| | G4-11 | Percentage of total employees covered by collective bargaining agreements | | 71 |
| | G4-12 | Supply chain | | 60-61 |
| | G4-13 | Significant changes during the reporting period regarding size, structure, ownership, or supply chain | | 6, 7, 71 |
| | G4-14 | Explanation of whether and how the precautionary approach or principle is addressed by the organization | | 17 |
| | G4-15 | Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses. | | 79 |
| | G4-16 | Memberships in major associations | | 80 |
| c. Identified Material | G4-17 | All entities included in the organization's consolidated financial statements or equivalent documents. Explanation of whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report. | 5.2, 7.3.2-7.3.4 | 71 |
| Boundaries | G4-18 | a. Process for defining the report content and the aspect boundaries.b. How the reporting principles for defining report content has been implemented | _ | 12, 13 |
| | G4-19 | List all the material aspects identified in the process for defining report content | _ | 13 |
| | G4-20 | For each material aspect report the boundary within the organization | | 1 |
| | G4-21 | For each material aspect report aspect boundary outside the organization | | - |
| | G4-22 | Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements | | - |
| | G4-23 | Report significant changes from previous reporting periods | | 38 |
| d. Stakeholder | G4-24 | A list of stakeholder groups engaged by the organization | 5.3 | 10 |
| Engagement | G4-25 | Basis for identification and selection of stakeholders with whom to engage | | 10 |
| | G4-26 | Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group | | 10, 12, 34-35 |
| | G4-27 | Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting (key issues by stakeholder type) | | 10 |
| e. Report | G4-28 | Reporting period | 7.5.3, 7.6.2 | 1 |
| Profile | G4-29 | Date of most recent previous report | | 1 |
| | G4-30 | Reporting cycle | | 1 |
| | G4-31 | Contact point for questions regarding the report or its contents | | 1 |
| | G4-32 | GRI Index a. 'In accordance' option chosen (core or comprehensive) b. GRI Content Index for the chosen option c. Reference to the External Assurance Report | | 72-75 |

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| e. Report Profile | G4-33 | a. Policy and current practice with regard to seeking external assurance for the report b. If not included in the assurance report accompanying the sustainability report, report the scope and basis of any external assurance provided. c. Relationship between the organization and the assurance providers. d. Explanation of whether the highest governance body or senior executives are involved in seeking assurance for the organization's sustainability report. | | 77-78 | |
| f. Governance | G4-34 | Governance structure, including committees of the highest governance body. dentify any committees responsible for decision-making on economic, environmental and social impacts | | 9, 14 | |
| | G4-35 | Process for delegating authority for economic, environmental, and social topics from the highest governance body to senior executives and other employees | 6.2, 7.4.3 | 9, 14 | |
| | G4-36 | Whether the organization has appointed an executive level position(s) with responsibility for economic, environmental, and social topics and whether post holders report directly to highest governance body | | 9, 14 | |
| | G4-37 | Process for consultation between stakeholders and the highest governance body on economic, environmental, and social topics | | 9, 14 | |
| | G4-38 | Composition of the highest governance body and its committees | | 9, 14 | |
| | G4-39 | Indicate whether the Chair of the highest governance body is also an executive officer | | 9, 14 | |
| | G4-40 | Report nomination and selection process for highest governance body and its committees and criteria used for nominating and selecting highest governance body members | | 9, 14 | |
| | G4-41 | Processes in place for the highest governance body to ensure conflicts of interest are avoided and managed - Report whether conflicts of interest are disclosed to stakeholders, cross-board membership, cross-shareholding with suppliers and other stakeholders, existence of controlling shareholder, related party disclosures | | - | |
| | G4-42 | The highest governance body's and senior executives' roles in the development, approval, and updating of the organization's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts | | 14 | |
| | G4-43 | Measures taken to develop and enhance the highest governance body's collective knowledge of economic, environmental and social topics | | - | |
| | G4-44 | a. Processes for evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics b. Actions taken in response to evaluation of the highest governance body's performance | | - | |
| | G4-45 | a. The highest governance body's role in the identification and management of economic, environmental and social impacts, risks, and opportunities b. Report whether stakeholder consultation is used to support the highest governance body's identification and management of economic, environmental and social impacts, risks, and opportunities | | 9, 14 | |
| | G4-46 | The highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics | | 9, 14 | |
| | G4-47 | Report the frequency of the highest governance body's review of economic, environmental and social impacts, risks, and opportunities | | 9, 14 | |
| | G4-48 | The highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material Aspects are covered | | 14 | |
| | G4-49 | Process for communicating critical concerns to the highest governance body | | 9 | |
| | G4-50 | The nature and total number of critical concerns that were communicated to the highest governance body and the mechanism(s) used to address and resolve them | | - | |
| | G4-51 | a. The remuneration policies for the highest governance body and senior executives for the below types of remuneration b. Report how performance criteria in the remuneration policy relate to the highest governance body's and senior executives' economic, environmental and social objectives | | 9 | b. None |
| | G4-52 | Process for determining remuneration (whether remuneration consultants are involved in determining remuneration and whether they are independent of management) | | 9 | |
| | G4-53 | Report how stakeholders' views are sought and taken into account regarding remuneration | | 9 | |
| | G4-54 | Report the ratio of the annual total compensation for the organization's highest-paid individual in each country of significant operations to the median annual total compensation for all employees | | - | |
| | G4-55 | Report the ratio of percentage increase in annual total compensation for the organization's highest-paid individual in each country of significant operations to the median percentage increase in annual total compensation for all employees | | - | |
| g. Ethics and | G4-56 | Describe the organization's values, principles, standards and norms of behavior such as codes of con- duct and codes of ethics | 7.7.5, 4.4, 6.6.3 | 15 | |
| Integrity | G4-57 | The internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines | | 16 | |
| | G4-58 | The internal and external mechanisms for reporting concerns about unethical or unlawful behavior | | 16 | |

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| 2. Specific S | tandard D | isclosures | | | |
| a. DMA | G4-DMA | a. Why this is material and the impact that makes it material. b. How organization manages it or its impacts c. Management approach | 6, 7.3.1, 7.4.3, 7.7.3, 7.7.5 | 12-13, 18-19, 36-37, 48-51 | |
| . Indicators | by Issue | | | | |
| conomic | | | | | |
| Economic Perfor- | G4-EC1 | Direct economic value generated and distributed | 6.8.1-6.8.3, 6.8.7, 6.8.9 | 20-21 | |
| nance | G4-EC2 | Financial implications and other risks and opportunities for the organization's activities due to climate change | 6.5.5 | 38-39 | |
| | G4-EC3 | Coverage of the organization's defined benefit plan obligations | 6.8.7 | 54 | |
| | G4-EC4 | Financial assistance received from government | - | 70 | |
| Market Presence | G4-EC5 | Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation | 6.3.7, 6.3.10, 6.4.3-6.4.4, 6.8.1-6.8.2 | - | |
| | G4-EC6 | Proportion of senior management hired from the local community at significant locations of operation | 6.4.3, 6.8.1-6.8.2, 6.8.5, 6.8.7 | - | |
| ndirect conomic mpacts | G4-EC7 | Development and impact of infrastructure investments and services supported | 6.3.9, 6.8.1-6.8.2, 6.8.7, 6.8.9 | 62-65 | |
| | G4-EC8 | Significant indirect economic impacts, including the extent of impacts | 6.3.9, 6.6.6- 6.6.7, 6.7.8, 6.8.1-6.8.2, 6.8.5, 6.8.7, 6.8.9 | 30-31, 39 | |
| Procurement Practices | G4-EC9 | Proportion of spending on local suppliers at significant locations of operation | 6.4.3, 6.6.6, 6.8.1-6.8.2, 6.8.7 | 30-31 | |
| invironmenta | al | | | | |
| Vaterials | G4-EN1 | Materials used by weight or volume | 6.5.4 | 38, 41 | |
| | G4-EN2 | Percentage of materials used that are recycled input materials | 6.5.4 | 43 | |
| nergy | G4-EN3 | Energy consumption within the organization | 6.5.4 | 38, 41 | |
| | G4-EN4 | Energy consumption outside of the organization | 6.5.4 | - | |
| | G4-EN5 | Energy intensity | 6.5.4 | 38 | |
| | G4-EN6 | Reduction of energy consumption | 6.5.4-5 | 38 | |
| | G4-EN7 | Reductions in energy requirements of products and services | 6.5.4-5 | 38 | |
| Vater | G4-EN8 | Total water withdrawal by source | 6.5.4 | 42 | |
| | G4-EN9 | Water sources significantly affected by withdrawal of water | 6.5.4 | 42 | |
| | G4-EN10 | Percentage and total volume of water recycled and reused | 6.5.4 | 42 | |
| liodiversity | G4-EN11 | Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas | 6.5.6 | 41 | |
| | G4-EN12 | Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biowdiversity value outside protected areas | 6.5.6 | - | N/A |
| | G4-EN13 G4-EN14 | Habitats protected or restored Total number of IUCN Red List species and national conservation list species with habitats | 6.5.6 6.5.6 | - | N/A N/A |
| mission | CAENAE | in areas affected by operations, by level of extinction risk | CEE | 20 | |
| 1112210112 | G4-EN15 | | 0.5.5 | 20 | |
| | G4-EN16 | chergy indirect greenhouse gas (GHG) emissions | 0.5.5 | 38 | |
| | G4-ENT/ | | 0.5.5 | - | |
| | G4-EN18 | Greennouse gas (GHG) emissions intensity | 0.5.5 | 38 | |
| | G4-EN19 | reduction of greenhouse gas (GHG) emissions | 0.5.5 | 38 | |
| | G4-EN20 | Emissions of ozone-depleting substances (ODS) | 6.5.3, 6.5.5 | - | N/A |
| | G4-EN21 | NUX, SUX, and other significant air emissions | 6.5.3 | 42 | |
| ffluents nd Waste | G4-EN22 | Total water discharge by quality and destination | 6.5.3-4 | 43 | |
| | G4-EN23 | Iotal weight of waste by type and disposal method | 6.5.3 | 43 | |
| | G4-EN24 G4-EN25 | Total number and volume of significant spills Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the | 6.5.3 6.5.3 | - | N/A N/A |
| | | Basel Convention (2) Annex I, II, III, and VIII, and percentage of transported waste shipped internationally | | | |

| G4-EN26 | Identity, size, protected status, and biod affected by the organization's discharge |
|------------|---|
| G4-EN27 | Extent of impact mitigation of environm |
| G4-EN28 | Percentage of products sold and their pa |
| G4-EN29 | Monetary value of significant fines and t with environmental laws and regulation: |
| G4-EN30 | Significant environmental impacts of tra for the organization's operations, and tr |
| G4-EN31 | Total environmental protection expendit |
| G4-EN32 | Percentage of new suppliers that were s |
| G4-EN33 | Significant actual and potential negative |
| G4-EN34 | Number of grievances about environmen resolved through formal grievance mech |
| | |
| s and Dece | nt Work |
| G4-LA1 | Total number and rates of new employee |
| G4-LA2 | Benefits provided to full-time employees by significant locations of operation |
| G4-LA3 | Return to work and retention rates after |
| G4-LA4 | Minimum notice periods regarding oper in collective agreements |
| G4-LA5 | Percentage of total workforce represent safety committees that help monitor and |
| G4-LA6 | Type of injury and rates of injury, occupa total number of work-related fatalities, l |
| G4-LA7 | Workers with high incidence or high risk |
| G4-LA8 | Health and safety topics covered in form |
| G4-LA9 | Average hours of training per year per e |
| G4-LA10 | Programs for skills management and life of employees and assist them in managi |
| G4-LA11 | Percentage of employees receiving regul and by employee category |
| G4-LA12 | Composition of governance bodies and according to gender, age group, minorit |
| G4-LA13 | Ratio of basic salary and remuneration of by significant locations of operation |
| G4-LA14 | Percentage of new suppliers that were s |
| G4-LA15 | Significant actual and potential negative actions taken |
| G4-LA16 | Number of grievances about labor pract and resolved through formal grievance r |
| | |
| G4-HR1 | Total number and percentage of signific rights clauses or that underwent human |
| G4-HR2 | Total hours of employee training on hun rights that are relevant to operations, inc |
| G4-HR3 | Total number of incidents of discrimination |
| G4-HR4 | Operations and suppliers identified in w collective bargaining may be violated or |
| | G4-EN26 G4-EN27 G4-EN28 G4-EN30 G4-EN31 G4-EN33 G4-EN34 G4-EN35 G4-EN36 G4-EN37 G4-EN38 G4-EN39 G4-EN39 G4-EN31 G4-EN31 |

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| | | | |
| iversity value of water bodies and related habitats significantly s of water and runoff | 6.5.3 | - | N/A |
| ental impacts of products and services | 6.5.3, 6.5.4, 6.5.5, 6.7.5 | 32-33, 39 | |
| ackaging materials that are reclaimed by category | 6.5.3, 6.5.4, 6.7.5 | - | N/A |
| otal number of non-monetary sanctions for non-compliance | 4.6 | 41 | |
| nsporting products and other goods and materials ansporting members of the workforce | 6.5.4, 6.6.6 | 47 | |
| ures and investments by type | 6.5.1-6.5.2 | 41 | |
| creened using environmental criteria | 6.3.5, 6.6.6, 7.3.1 | 60 | |
| environmental impacts in the supply chain and actions taken | 6.3.5, 6.6.6, 7.3.1 | - | |
| ntal impacts filed, addressed, and ianisms | 6.3.6 | - | None |
| | | | |
| | | | |
| hires and employee turnover by age group, gender and region | 6.4.3 | 71 | |
| that are not provided to temporary or part-time employees, | 6.4.4, 6.8.7 | 54 | |
| parental leave, by gender | 6.4.4 | 71 | |
| ational changes, including whether these are specified | 6.4.3, 6.4.5 | 55 | |
| ed in formal joint management–worker health and d advise on occupational health and safety programs | 6.4.6 | 56 | |
| tional diseases, lost days, and absenteeism, and by region and by gender | 6.4.6, 6.8.8 | - | |
| of diseases related to their occupation | 6.4.6, 6.8.8 | - | |
| al agreements with trade unions | 6.4.6 | 56 | |
| mployee by gender, and by employee category | 6.4.7 | 50-52 | |
| long learning that support the continued employability ng career endings | 6.4.7, 6.8.5 | 50-52 | |
| ar performance and career development reviews, by gender | 6.4.7 | 14, 71 | All em- ployees |
| breakdown of employees per employee category y group membership, and other indicators of diversity | 6.2.3, 6.3.7, 6.3.10, 6.4.3 | 14, 71 | |
| f women to men by employee category, | 6.3.7, 6.3.10, 6.4.3, 6.4.4 | - | |
| creened using labor practices criteria | 6.3.5, 6.4.3, 6.6.6, 7.3.1 | - | |
| impacts for labor practices in the supply chain and | 6.3.5, 6.4.3, 6.6.6, 7.3.1 | - | |
| ices filed, addressed, nechanisms | 6.3.6 | - | |
| ant investment approximate and existing to the time built. | 622.625 | | Nen- |
| rights screening | 6.6.6 | - | None |
| nan rights policies or procedures concerning aspects of human cluding the percentage of employees trained | 6.3.5 | 16 | |
| on and corrective actions taken | 6.3.6, 6.3.7, 6.3.10, 6.4.3 | - | N/A |
| hich the right to exercise freedom of association and at significant risk, and measures taken to support these rights | 6.3.3, 6.3.4, 6.3.5, 6.3.8, 6.3.10, 6.4.5, 6.6.6 | 55 | |
| | | | |

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|--|------------|--|---|-------|---------|--|--|
| Human Rights | | | | | | | |
| Child Labor | G4-HR5 | Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor | 6.3.3, 6.3.4, 6.3.5, 6.3.7, 6.3.10, 6.6.6, 6.8.4 | 55 | | | |
| Forced or Compulsory Labor | G4-HR6 | Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor | 6.3.3, 6.3.4, 6.3.5, 6.3.10, 6.6.6 | 55 | | | |
| Security Practices | G4-HR7 | Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations | 6.3.4, 6.3.5, - Na 6.6.6 | | N/A | | |
| Indigenous Rights | G4-HR8 | Total number of incidents of violations involving rights of indigenous peoples and actions taken | 6.3.4, 6.3.6, - N// 6.3.7, 6.3.8, 6.6.7, 6.8.3 | | N/A | | |
| Assessment | G4-HR9 | Total number and percentage of operations that have been subject to human rights reviews or impact assessments | 6.3.3, 6.3.4, - 6.3.5 | | | | |
| Supplier Human Rights Assessment | G4-HR10 | Percentage of new suppliers that were screened using human rights criteria | 6.3.3-6.3.6 | - | | | |
| | G4-HR11 | Significant actual and potential negative human rights impacts in the supply chain and actions taken | 6.3.3-6.3.6 | - | | | |
| Human Rights Grievance Mechanisms | G4-HR12 | Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms | 6.3.6 | - | None | | |
| Society | | | | | | | |
| Local Communities | G4-SO1 | Percentage of operations with implemented local community engagement, impact assessments, and development programs | 6.3.9, 6.5.1- 6.5.3, 6.8 | 62-65 | | | |
| | G4-SO2 | Operations with significant actual or potential negative impacts on local communities | 6.3.9, 6.5.3, 6.8 | - | None | | |
| Anti- corruption | G4-SO3 | Total number and percentage of operations assessed for risks related to corruption and the significant risks identified | 6.6.1-6.6.3 | - | None | | |
| | G4-SO4 | Communication and training on anti-corruption policies and procedures | 6.6.1-6.6.3, 6.6.6 | 15-16 | | | |
| | G4-SO5 | Confirmed incidents of corruption and actions taken | 6.6.1-6.6.3 | 15-16 | | | |
| Public Policy | G4-SO6 | Total value of political contributions by country and recipient/beneficiary | 6.6.1-6.6.2, 6.6.4 | - | N/A | | |
| Anti- competitive Behavior | G4-SO7 | Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes | 6.6.1-6.6.2, 6.6.5, 6.6.7 | - | None | | |
| Compliance | G4-S08 | Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations | 4.6 - | | None | | |
| Supplier Assessment for Impacts on Society | G4-SO9 | Percentage of new suppliers that were screened using criteria for impacts on society | 6.3.5, 6.6.1- 6.6.2, 6.6.6, 6.8.1-6.8.2, 7.3.1 | 60 | | | |
| | G4-SO10 | Significant actual and potential negative impacts on society in the supply chain and actions taken | 6.3.5, 6.6.1- 6.6.2, 6.6.6, 6.8.1-6.8.2, 7.3.1 | - | | | |
| Grievance Mechanisms for Impacts on Society | G4-SO11 | Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms | 6.3.6, 6.6.1- 6.6.2, 6.8.1-6.8.2 | - | None | | |
| Product Resp | onsibility | | | | | | |
| Customer Health and Safety | G4-PR1 | Percentage of significant product and service categories for which health and safety impacts are assessed for improvement | 6.7.1-6.7.2, 6.7.4-6.7.5, 6.8.8 | - | | | |
| | G4-PR2 | Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes | 4.6, 6.7.1- 6.7.2-6.7.4- 6.7.5, 6.8.8 | - | | | |
| Product and Service Labelling | G4-PR3 | Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant products and service categories subject to such information requirements | 6.7.1-6.7.5, 6.7.9 | 58-59 | | | |
| | G4-PR4 | Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes | 4.6, 6.7.1- 6.7.5, 6.7.9 | - | None | | |

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| Product Resp | onsibility | | | | |
| Product and Service Labelling | G4-PR5 | Results of surveys measuring customer satisfaction | 3.7.1-6.7.2, 6.7.6 | 58-59 | |
| Marketing | G4-PR6 | Sale of banned or disputed products | - | - | |
| | G4-PR7 | Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes | 4.6, 6.7.1-6.7.3 | - | None |
| Customer Privacy | G4-PR8 | Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data | 6.7.1-6.7.2, 6.7.7 | - | None |
| Compliance | G4-PR9 | Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services | 4.6, 6.7.1- 6.7.2, 6.7.6 | - | None |
| Forced or Compulsory Labor | G4-HR6 | Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor | 6.3.3, 6.3.4, 6.3.5, 6.3.10, 6.6.6 | 55 | |

| lectric Uti | lity Sector Specific (EUSS) | Page |
|-------------|---|---------------------------------------|
| EU1 | Installed capacity | 6-7 |
| EU2 | Net energy output | 70 |
| EU3 | Number of residential, industrial, institutional and commercial customer accounts | N/A |
| EU4 | Length of above and underground transmission and distribution lines | N/A |
| EU5 | Allocation of CO2e emissions allowances or equivalent, broken down by carbon trading framework | N/A |
| EU6 | Management approach to ensure short and long-term electricity availability and reliability | 26-27 |
| EU7 | Demand-side management programs | 27 |
| EU8 | Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development | 23 |
| EU9 | Provisions for decommissioning of nuclear power sites | N/A |
| EU10 | Planned capacity against projected electricity demand over the long term, broken down by energy source | 26-27 |
| EU11 | Average generation efficiency of plants by energy source | 27 |
| EU12 | Transmission and distribution losses as a percentage of total energy | 70 |
| EU13 | Biodiversity of offset habitats compared to the biodiversity of the affected areas | N/A |
| EU14 | Programs and processes to ensure the availability of a skilled workforce | 50-52 |
| EU15 | Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and by region | 71 |
| EU16 | Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors | 56-57 |
| EU17 | Days worked by contractor and subcontractor employees involved in construction, operation & maintenance activities | Complied with the legal working hours |
| EU18 | Percentage of contractor and subcontractor employees that have undergone relevant health and safety training | 57 |
| EU19 | Stakeholder participation in the decision making process related to energy planning and infrastructure development | 26-27 |
| EU20 | Approach to managing the impacts of displacement | N/A |
| EU21 | Contingency planning measures, disaster/emergency management plan and training programs, and recovery/restoration plans | 40, 56-57 |
| EU22 | Number of people physically or economically displaced and compensation, broken down by type of project | N/A |
| EU23 | Programs, including those in partnership with government, to improve or maintain access to electricity and customer support services | N/A |
| EU24 | Practices to address language, cultural, low literacy and disability related barriers to accessing and safely using electricity and customer support services | N/A |
| EU25 | Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases | N/A |
| EU26 | Percentage of population unserved in licensed distribution or service areas | N/A |
| EU27 | Number of residential disconnections for non-payment, broken down by duration of disconnection and by regulatory regime | N/A |
| EU28 | Power outage frequency | 27 |
| EU29 | Average power outage duration | 27 |
| EU30 | Average plant availability factor by energy source | 27 |

Independent Assurance Report





To the Management of POSCO ENERGY

We have been commissioned to carry out an assurance engagement on the 2013 Sustainability Report (the "Report") of POSCO ENERGY (the "Company") and have reviewed the information presented in the Report.

Scope of Assurance

This assurance engagement covered the data ended on December 31, 2013 and provides limited assurance for the following.

- The extent to which the principles of Materiality, Inclusivity and Responsiveness are adopted,
- in line with the requirements of the Account Ability Principles Standard 2008 ("AA1000 APS")
- Whether the non-financial information stated in the 'Sustainability Management Performance Data (pp. 71-72) ("Sustainability Management Data") is generated in line with the 'Report Guidelines' in 'About This Report.'

We have reviewed the consistency of the content in this Report with other information and data subject to the assurance engagement. We also considered the impacts of significant errors or inconsistency in this Report that may affect the Assurance Report. However our responsibility is limited to the data commissioned to review.

Assurance Engagement

We conducted our assurance engagement in accordance with the ISAE 3000(1) and AA1000AS (2). The limited assurance of the ISAE 3000 is in accord with the Moderate level of assurance defined in the AA1000AS (2008). Our assurance was based on the Type 2 defined in the AA1000AS (2008).

We performed our assurance engagement on the following matters:

- 1. To find approaches for the three principles of the AA1000APS including Materiality, Inclusivity and Responsiveness, we conducted interviews with the staff in charge of internal reporting and collecting of sustainability management report of the Company.
- 2. We visited the headquarters and the Incheon Operation to understand the system and process that manage and report sustainability management data.
- 3. We reviewed documents related to the result of risk assessment processes, policies and criteria related to sustainability management, materiality matrix for assessing sustainability issues, and stakeholders' participation.
- 4. We reviewed the appropriateness of designing and operating the key processes and control activities to manage and report sustainability management data during the report period.
- 5. We performed limited assurance engagement for the given data based on questions and analytical reviews.
- 6. We conducted interviews with the management.

Responsibilities

The management of the Company is responsible for managing sustainability data, setting the assessment criteria for the three principles of the AA1000APS, measuring the performance in accordance with such criteria, and stating the result in this Report. Our responsibility is limited to provide the management with results of our assurance engagement. This Assurance Report is intended for the management of the Company to report the Company's sustainability management performances and activities. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the management of the Company for our work or this report save where terms are expressly agreed and with our prior consent in writing.

Inherent Limitations

Non-financial performance information is subject to more inherent limitations than financial information, given the characteristics of the subject matter and the methods used for determining such information. Qualitative interpretations of relevance, materiality and the accuracy of data are subject to individual assumptions and judgments. A limited assurance engagement is less in scope than a reasonable assurance engagement under ISAE 3000. Consequently, the nature, timing and extent of procedures for gathering sufficient, appropriate evidence are deliberately limited relative to a reasonable assurance engagement. In particular:

- subject to assurance by us.

Conclusions

Based on the assurance work performed by us and the suggested assessment criteria, we have concluded the following. Our conclusions for the Company's application of the AA1000APS principles are provided below. Inclusivity

- shareholders, local communities, and employees via stakeholder communication channels.
- in the process of collecting issues via stakeholder communication channels.

Materiality

- the process of selecting the issues.

Responsiveness

- sustainability management performances.
- Nothing has come to our attention that causes us to believe that the response activities against the key issues and sustainability management performances of the company violated the principle of responsiveness.

not fairly stated, in all material respects, in accordance with the reporting principles.

Recommendations

From our work, we have provided the following recommendations to the management which do not affect the assurance conclusion. • The operation system of the annual Stakeholder Committee is advised to improve to reflect the result of the committee

- to sustainability management of the Company.
- such goals are advised to be disclosed more actively
- to increase the accuracy of the data so that it can be applied to business decision-making processes.

• We do not participate in the stakeholder activities of the Company. Our conclusions are based on our discussions with manage ment and staff of the Company and our review of selected documents provided to us by the Company

• The scope of our work was restricted to 2013 performance only and information relating to the early periods have not been

• The Company has collected the major interests and opinions of the customers, customer companies, partner companies,

• Nothing has come to our attention that causes us to believe that significant stakeholder groups were omitted by the Company

• The Company properly selected sustainability issues through an appropriate issue identifying process. • Nothing has come to our attention that causes us to believe that significant issues were omitted by the Company during

• The Company included its response activities against the key sustainability issues selected during the issue identifying process and

Nothing has come to our attention that causes us to believe that the sustainability data for the year ended December 31, 2013 are

• The sustainability management strategies, related goals for key indicators, level of achievement goals, and plans to achieve

• The internal management process of sustainability management data, regarding data collection, is advised to be improved

Ahn Kyung-Tae Chairman and CEO Samil PricewaterhouseCoopers May 2014

⁽¹⁾ International Standard on Assurance Engagements 3000 (Revised) – 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' issued by International Auditing and Assurance Standards Board

⁽²⁾ AA1000 Assurance Standard(2008), issued by AccountAbility

UN Global Compact

| Classification | Pri | nciples | GRI | In This Report |
|-----------------|-----|--|---|----------------|
| Human Rights | 1 | Businesses should support and respect the protection of internationally proclaimed human rights; and | G4-HR2, G4-HR7,G4-HR8, G4-HR9, G4-HR12, G4-SO1, G4-SO2 | 16, 55, 60 |
| | 2 | make sure that they are not complicit in human rights abuses. | G4-HR1, G4-HR10, G4-HR11 | 60 |
| Labor Standards | 3 | Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; | G4-11, G4-HR4, G4-LA4 | 55, 71 |
| | 4 | the elimination of all forms of forced and compulsorylabor; | G4-HR6 | 55 |
| | 5 | the effective abolition of child labor; and | G4-HR5 | 55 |
| | 6 | the elimination of discrimination in respect of employment and occupation. | G4-10, G4-EC5, G4-EC6, G4-LA1, G4-LA3, G4-LA9, G4-LA11, G4-LA12, G4-LA13, G4-HR3 | 50, 52, 71 |
| Environment | 7 | Businesses should support a precautionary approach to environmental challenges; | G4-E2, G4-EN1, G4-EN3, G4-EN8, G4-EN15, G4-EN16, G4-EN17, G4-EN20, G4-EN21, G4-EN27, G4-EN31 | 17, 40 |
| | 8 | undertake initiatives to promote greater environmental responsibility; and | G4-EN1, G4-EN2, G4-EN3, G4-EN4, G4-EN5, G4-EN6, G4-EN7, G4-EN8, G4-EN9, G4-EN10, G4-EN11, G4-EN12, G4-EN13, G4-EN14, G4-EN15, G4-EN16, G4-EN17, G4-EN18, G4-EN19, G4-EN20, G4-EN21, G4-EN22, G4-EN23, G4-EN24, G4-EN24, G4-EN25, G4-EN26, G4-EN27, G4-EN28 | 38-45 |
| | 9 | encourage the development and diffusion of environmentally friendly technologies. | G4-EN29, G4-EN30, G4-EN31, G4-EN32, G4-EN33, G4-EN34 | 38-45 |
| Anti-Corruption | 10 | Businesses should combat corruption in all its forms, including extortion and bribery. | G4-EN6, G4-EN7, G4-EN19, G4-EN27, G4-EN31 | 16 |

Membership of Associations

- UN GLOBAL COMPACT
- Creating Shared Value Forum
- The Korean Society of Mechanical Engineers
- The Korea Chamber of Commerce & Industry
- Korea Electric Association
- Independent Power Producer Association
- Executive Committee for "One Less Nuclear Power Plant" campaign by Seoul Metropolitan Government
- KSA Energy Management System Forum
- Association of Future Strategy Forum on Energy
 & Resources Development
- Energy Policy Council
- BEST SM Forum
- Korea Personnel Improvement Association
- Incheon Green Union
- Incheon Chamber of commerce and industry
- Incheon Safety Association
- Korea Federation for Environmental Movement
- Green Growth Council under the Federation of Korean Industries
- The Federation of Korean Industries
- Korea Power Exchange
- The Korean Society of Climate Change Research
- Korea Industrial Technology Association
- The Korean Society For New And Renewable Energy
- Korea New & Renewable Energy
- Korea Society of Energy & Climate Change
- Korea Energy Foundation
- The Korean Institute of Resources Recycling
- Korea Battery Industry Association
- Korea Photovoltaic Industry Association
- Korea Wind Energy Industry Association
- Korea Chemicals Management Association
- Korean Environmental Management Association
- Korea Environmental Policy and Administration Society
- Energy & Mineral Resources Development Association of Kore
- Environment Engineers Association
- Environmental Preservation Association
- Climate Change Center

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