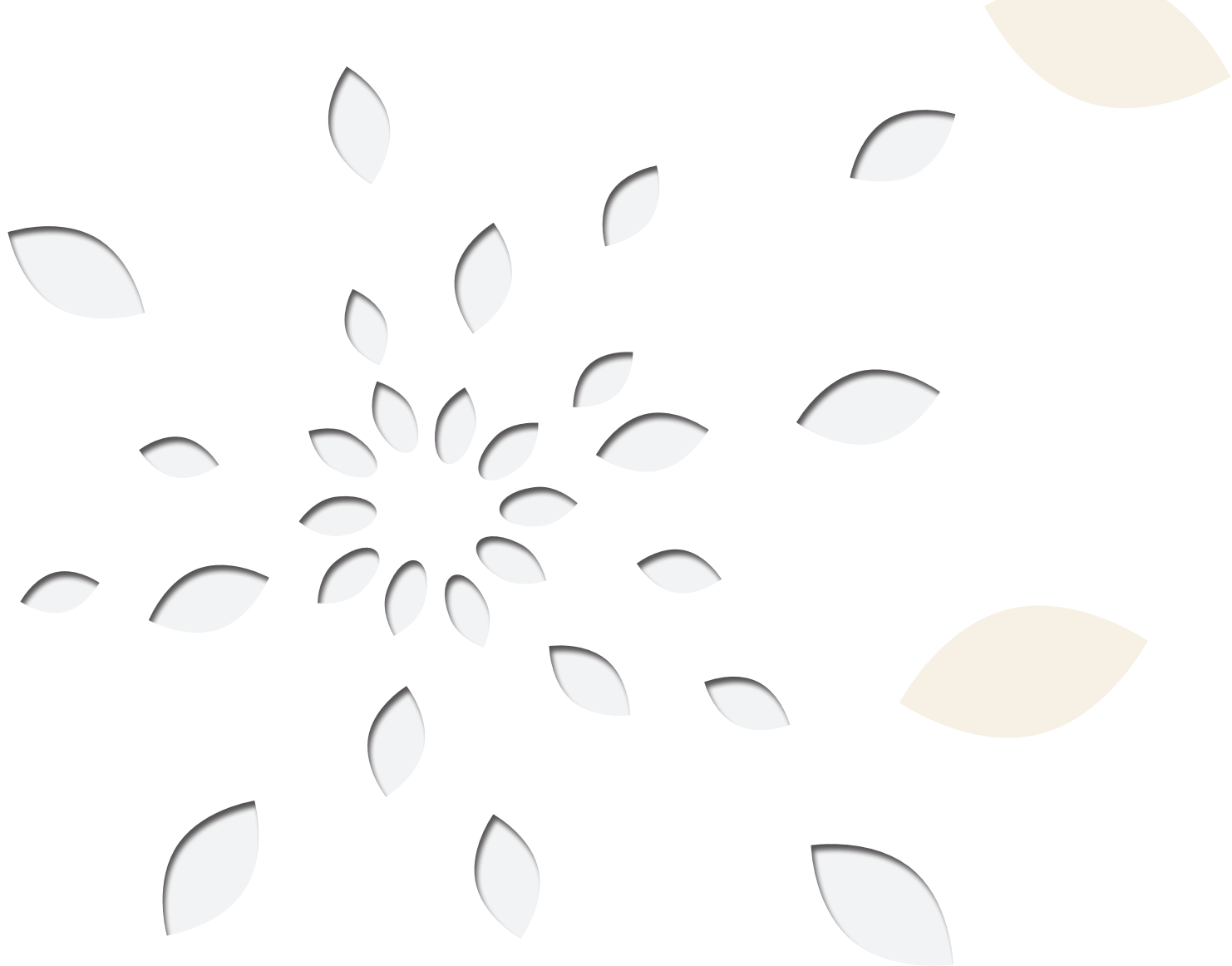




Sustainability Report 2014

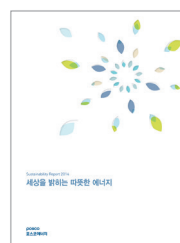
# Energy for a Better World



## About this Report

Since the first publication of the sustainability report in 2012 for the first time among IPPs, POSCO ENERGY has assumed a leading role in the industry with its annual publication of sustainability reports. This year, the 4th edition of the report will help us to share our unwavering commitment to sustainable management and transparently disclose our activities and performances on key issues, while allowing us to better communicate with all stakeholders.

<b>Report period</b>	Jan. ~ Dec. 2014 (including some progresses in 2015)
<b>Report scope</b>	Performances of all business sites and some subsidiaries
<b>Report standards</b>	In terms of fiscal year, presented in a time series for no less than three years
<b>Report guidelines</b>	GRI (Global Reporting Initiative) G4, EUSS (Energy Utility Sector Supplement Energy Industry Optional Indexes), ISO26000
<b>Report verification</b>	External verification organization (Korea Productivity Center) Independent Assurance Report (p. 66-67)
<b>Additional information</b>	POSCO ENERGY homepage ( <a href="http://www.poscoenergy.com">www.poscoenergy.com</a> )



### Cover Story

Inspired by the symbol for our slogan "Energy for a Better World", it expresses simple and modern energy. The heartwarming energy produced by POSCO ENERGY will make our lives more sustainable and beautiful.

If you have any questions or comment, please contact us.

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POSCO ENERGY**

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## CEO Message

### Dear Stakeholders,

I would like to express my sincere gratitude for your interest and support for POSCO ENERGY. POSCO ENERGY is pleased to share our efforts to create values and performance with stakeholders through the sustainability report.

As the first and largest IPP in Korea, POSCO ENERGY is a specialized energy company engaged in power production, fuel cell energy, and new and renewable energy businesses, contributing to the public good and the national economy with its stable supply of electricity. In our main business field, power generation, the company has added the new generator units 7 to 9, which boast the top-level generating efficiency in Korea, in Incheon LNG Combined Cycle Power Plant with a total of 3,412MW capacity, while operating Off-Gas Combined Cycle Power Plants with a 300MW capacity in Gwangyang and Pohang, respectively. The planned construction of the Coal-Fired Thermal Power Generation Plant of 2,100MW in Samcheok will enable us to enter the domestic base load market and help us to establish a business portfolio for a total energy corporation, laying the foundation for sustainable growth.

The Fuel Cell business has been brought to the fore as one of the nation's leading new growth-engines. Fuel cells are eco-friendly, highly efficient dispersed energy sources that don't require a transmission network, and the company is expected to attain 100% localization of fuel cell with the completion of a cell manufacturing plant by 2015. In particular, the Fuel Cell business is highly promising as it has been selected as a flagship project as one of the future growth engines in Korea and the company plans to cultivate the business as one of the new growth businesses under the umbrella of POSCO Group. Regarding new and renewable businesses, we are engaged in resource recycling projects such as the Busan SRF Power Plant that produces electricity from household wastes, Tanchon District Heating System that uses sewage heat resource, and in Solar Power business, Offshore and Onshore Wind Power business, as well as some community-involved business to contribute to the public good.

Our business is not confined to national borders: the company operates power generation businesses in Indonesia, Vietnam, and Mongolia, leaping forward to be a global total energy corporation that increases power supply rates and creates stable jobs in its overseas operation sites and accelerates its overseas expansion.

Besides, we have grown to be a leader in eco-friendly initiatives as we create environmental values by operating eco-friendly power plants and participating in activities to reduce greenhouse gases. We are engaged in activities to lower greenhouse gas emission, as well as expand competitive new and renewable energy businesses, taking the lead in responding to global climate changes. POSCO ENERGY is committed to protecting and preserving environment with meticulous eco-friendly management activities such as producing clean energy with the operation of highly-efficient power generation and minimizing environmental pollutants. We intend to expand the growth potential of eco-friendly energy businesses through steady investment and R&D in the environmental sector.

POSCO ENERGY strives to build trust and confidence and to create an organizational culture in which all members care for each other and enjoy lively communication. In an effort to realize co-prosperity as part of our social responsibilities, we are also committed to activities to create shared values with stakeholders. Our reaction steam turbine business enabled us to actualize co-development, while the formation of a fuel cell cluster sharpened the competitive edges of the industry and





revitalized the local economy. To promote energy welfare for the energy deprived, we have expanded energy efficient remodeling work for aged houses and the talent sharing service for electricity check, etc. We also sincerely carry out social contribution activities through employees' volunteer work and the 1% Sharing Fund Campaign.

It is our wish to grow together with all stakeholders to realize our vision of “Beyond Energy, Better Life.” We will exert our utmost efforts to make a new history for POSCO ENERGY and grow into a corporation worthy of your fundamental trust and support.

On behalf of POSCO ENERGY, we are all very grateful for your continued interest and support.

Thank you.

**Dong-jun Yoon**  
President & CEO

## Our Leadership

POSCO ENERGY annually conducts interviews with sustainability management experts in order to reaffirm the commitment for sustainability management, building a consensus in the direction which POSCO ENERGY should pursue. POSCO ENERGY makes strenuous efforts to ensure that its leadership and management make ethical decisions in line with its visions. It can be assured that POSCO ENERGY will always be committed to act a corporation that grows together with stakeholders in the creation of values.

**Yong-hee Cho**  
Senior Vice President  
**Business Development Department I**  
We all attain both economic profits and environmental values to consolidate our position as the leader in the global market.

**Seung-hwan Cho**  
Senior Vice President  
**Corporate Audit Division**  
POSCO ENERGY is creating an ethical culture backed by trust, communication, and respect for humans.

**Kyung-hoon Lee**  
Senior Executive Vice President  
It is essential for Sustainability Management to strike a balance. Based on integrity and transparency, POSCO ENERGY seeks to attain balanced growth.

**Min-shik Shim**  
Senior Vice President  
**Safety and Innovation Department**  
With the establishment of an integrated system, we found a basis for the competitiveness of POSCO ENERGY and are making an innovative and safe corporate culture that is engaged in by every member of our organization.



**Tong-wook Shim**  
Executive Vice President  
**Management & Planning Division**  
Founded on the substantial nature of our company, power generation developer, we respond to changing market paradigms and prepare for corporate financial stability.

**Heung-yul Yang**  
Executive Vice President  
**Management & Supporting Division**  
We will strive to make a happy workplace where employees can balance work and life. We will foster an organizational culture in which employees can feel a sense of satisfaction with their work.

**Sang-soon Cho**  
Vice President  
**Power Policy Department**  
We contribute to the public good and national sustainability with our power generation business and fulfill our social responsibility as a corporate citizen.



**Tae-won Lee**  
**Senior Vice President**  
**Fuel Cell Technology Institute**

We will secure profitability, sustainability, and growth potential by making efforts to cut down costs for fuel cell and improve our products.

**Jin-won Park**  
**Senior Vice President**  
**Power Plant Development Division**

Based on co-prosperity with the local community and painstaking management over environment and safety, we are establishing eco-friendly power generation plants where our employees are happy.

**Sung-byung Kim**  
**Vice President**  
**Overseas Business Development PJT**

While we strive to penetrate overseas markets, we also pay attention to social and environmental impact management and co-development with countries where we operate.

**Hee-yoon Kang**  
**Senior Vice President**  
**Business Development Department II**

With the establishment of the Total Value Chain for our eco-friendly business, we are reinforcing our competitiveness in the new and renewable energy market.



**Chang-dong Shin**  
**Executive Vice President**  
**Business Development Division**  
 We will become a leading global IPP corporation by flexibly responding to the ever-changing global energy market environment.

**Sung-gyu Han**  
**Executive Vice President**  
**Fuel Cell Business Division**  
 To further heighten the value of the fuel cell business, one of the national new growth engines, we carry out sustainable development and efforts.

**Chang-hwan Kim**  
**Vice President**  
**Incheon Power Plant**  
 Based on an eco-friendly management and a safety-oriented corporate culture, we are contributing to the stable supply of electricity as peak-load power plants by consistent facility improvements and maximization of operation-efficiency.

## Introduction to POSCO ENERGY

### Vision and Core Values

As the first and largest IPP in Korea, POSCO ENERGY is engaged in power generation, new and renewable energy, and fuel cells. The company's mission to make a brighter world by providing cleaner energy underpins its vision, core values, and strategic systems. The company proclaimed its new vision of "Beyond Energy, Better Life" in 2014, manifesting its keen commitment to make a better world by overcoming any limits and obstacles and by growing further, rather than settling for current successes.

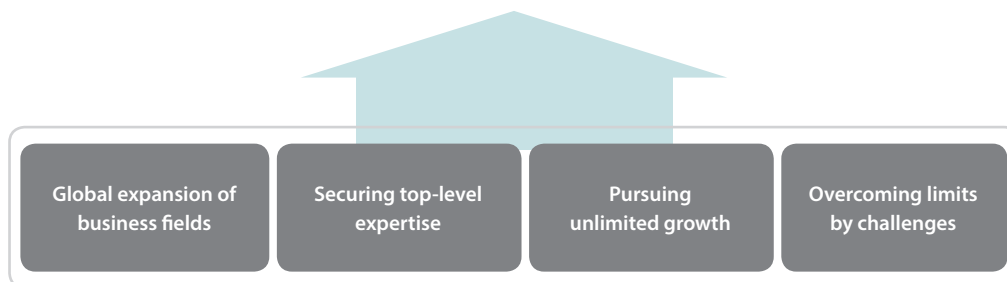
Mission

**We make a brighter world by providing cleaner energy**

Vision

**Beyond Energy, Better Life**

**We build a better world, powered by the energy of dreams and challenges**



### Business Fields

**LNG Combined Cycle Power Plant**

- Incheon LNG Combined Cycle Power Plant (Units 3-6) 2,152MW
- Incheon LNG Combined Cycle Power Plant (Units 7-9) 1,260MW

#### Waste to Energy Business

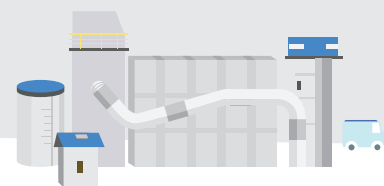
- Busan SRF (Solid Refuse Fuel) Power Plant  
Waste Treatment Facility Capacity: 900 tons/day  
Power Generation Facility Capacity: 500 tons/day (25MW)
- Tanchon Sewage Heat Energy Utilization Facility  
Heat Pump Capacity: 63Gcal/hr.  
Heat Generation: 200,000Gcal/yr.

**Off-Gas Combined Cycle Power Plant**

- Gwangyang Off-Gas Combined Cycle Power Plant 284MW
- Pohang Off-Gas Combined Cycle Power Plant 290MW

#### Solar Power Plant

- Shinan Solar (Photovoltaic) Power Plant 14.5MW  
2012 (2MW), 2013 (5MW), 2014 (7.5MW)

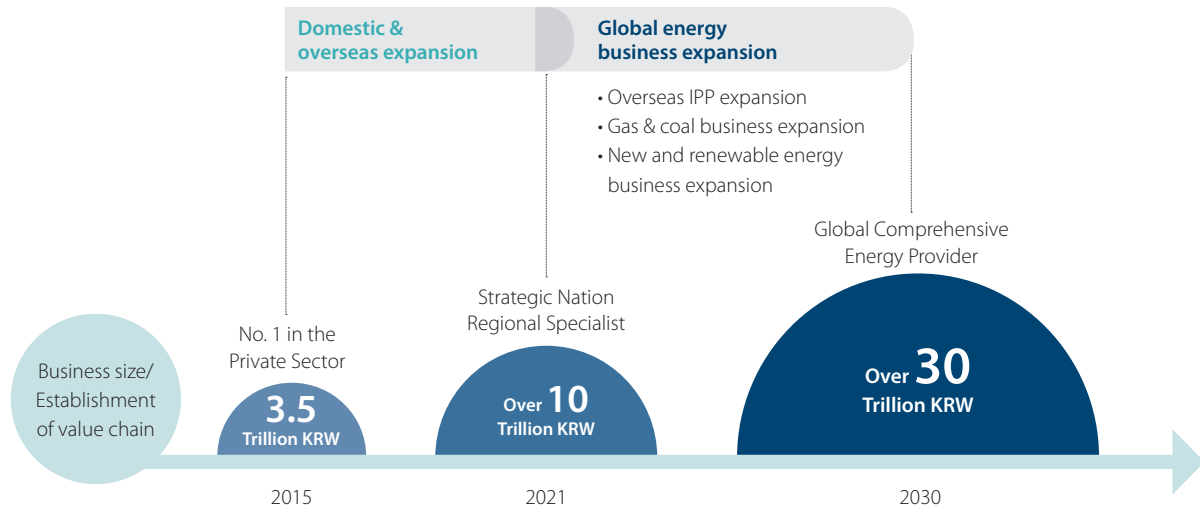


#### Fuel Cell Power Plant

- 20 plants in operation (Total 149.2MW) in Korea
  - ※ 4 plants directly managed, 1 plant for building
  - Pohang 2.4MW / Nowon 2.4MW / Sangam 2.4MW / Incheon 2.4MW
  - Seoul Children's Grand Park (Gwangjin) 100kW

## Business Portfolio

Centering on its new vision, POSCO ENERGY strives to become a globally recognized comprehensive energy provider. The company is expanding its business portfolio such as LNG, Off-Gas Combined Cycle Power Generation, and Coal-fired Thermal Power Generation and adding new energy businesses such as new and renewable energy and fuel cell businesses to its existing businesses. Based on know-how accumulated from many years of domestic business experiences, POSCO ENERGY will diversify power sources and continue to expand overseas IPP to leap forward and secure its position as a globally recognized comprehensive energy provider.



## Corporate Governance of Affiliates

Affiliated company	Share Ratio
Techren Solar, LLC	99.99%
PSC Energy Global Co., Ltd	100%
PT.KRAKATAU POSCO ENERGY	90%
POSCO E&E CO., Ltd	100%
Tamra Offshore Wind Power Plant	64%
Hyundai Securities (No.1) Private equity fund	55.12%
POSPower Co., Ltd	100%

### Fuel Cell Production & Service

- Pohang Fuel Cell Herb
- Annual Production Capacity 100MW

### Wind Power Plant

- Tamra Offshore Wind Power Complex 30MW (Construction to be completed by 2016)
- Jeonnam Onshore Wind Power Complex 100MW (Construction to be completed by 2017)
- Jeonnam Offshore Wind Power Complex 300MW (Project under development)

### Coal-Fired Thermal Power Plant

- Samcheok Coal-Fired Thermal Power Plant of 2,100MW (Scheduled to be completed by 2021)

### Overseas Business

- CHP5 Coal-fired Cogeneration Power Project 450MW in Mongolia (Scheduled to be completed by 2020)
- Mong Duong II Coal Power Plant 1,200MW in Vietnam
- Off-Gas Power Plant 200MW in Indonesia

## POSCO ENERGY's Value Chain and Creating Shared Values

Business activities and performance

### Socio-Environmental Value Input

- Material & service procurement
- Energy, water, other resources procurement
- Partner supporting activities: Fair trade, benefit sharing, etc.



Partners' Procurements

**670** Billion KRW

### Intellectual Property Value Input

- Develop high efficiency and applied MCFC(Molten Carbonate Fuel Cell)
- Develop ESS(Energy Storage System)
- Develop middle-low waste heat recovery technology
- Develop technology to transform waste source to gas



R&D Investment

**25.1** Billion KRW



R&D Workforce

**126** Persons

Value Chain

Material Procurement

R&D

Example of Creating Shared Value (CSV)

### Reinforce industrial competitive power by forming a cluster

POSCO ENERGY plans to construct a cell manufacturing plant of 6,400 pyong (approximately 25,305 sq. yds.) in Pohang Fuel Cell Park in Gyeongbuk in 2014 to produce 100MW cells annually. As some of the lines of the cell manufacturing plant have been installed and put into test-operations, we are focusing our endeavors on securing a domestic supply network for materials and parts. Creating a fuel cell specialized cluster founded on its industry, academia, and research network, POSCO ENERGY will secure core competency for developing the fuel cell industry and further contribute to the revitalization of the Pohang community and national economy through mutually benefiting cooperation with SMEs and job creation.



Hydrogen Fuel Cell Power Valley (Pohang Fuel Cell Industry Cluster)

### Technology development, business development, and greenhouse gas reduction!

Utilizing waste heat energy to produce electricity and consequently creating profits, reaction steam turbine technology makes it possible to achieve improvements in generating efficiency and fuel cost reductions. POSCO ENERGY also made a full-fledged market entry with the small turbine business and successfully commercialized the technology to sell collective energy businesses. Furthermore, the company plans to expand its business area from Korea to the Southeast Asian markets. As It also succeeded in developing new technology through joint research cooperation with the domestic SMEs, it is acknowledged as an excellent example of shared growth.



Business Opportunity and Job Creation

Local Government	Fuel Cell Component Manufactures	Local Communities	Pohang Research Complex
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Annual Electricity Output



**3.9** GWh

\*Based on 12 hr/day operation

Annual CO<sub>2</sub> Reduction



**2.3**

Thousand tCO<sub>2</sub>

**Socio-Environmental Value Input****New and renewable energy**

- Solar Power Plant Operation
- Onshore & Offshore Wind Power Complex Project

**Waste to Energy**

- SRF business to turn household waste into fuel
- Tancheon district heating system using sewage heat resource



GHG Reduction with Eco-friendly Energy Projects

**372** Thousand tCO<sub>2</sub>

**Production Value Input** (Electricity supply)

- Incheon LNG Combined Cycle Power Plant
- Off-Gas Combined Cycle Power Plants (Gwangyang, Pohang)

**Intellectual Asset Value Input**

(Fuel Cell Business)

- Construction of BOP manufacturing plant, Tech. research center
- Provide Total Solution on fuel cell



Installed  
Generating Capacity

**4,025** MW



Fuel Cell Supply

**149.2** MW

**Power Generation****Use****Waste to Energy Business utilizing waste resources**

In short, waste to Energy Business is involved in recycling waste to produce new energy. It employs eco-friendly processes to treat household waste, sewage sludge, waste heat, etc. to eventually produce energy. POSCO ENERGY operates the Busan SRF Power Business and Tancheon Sewage Heat Energy Utilization Business.

**Busan SRF  
Power Business**

Average, Expected Annual Sales  
for Operation Period(15yrs.)

**\$ 34.5** Billion KRW

Amount of Waste  
Treated per Day

**900** Tons

Annual Amount of LNG  
Used as a Substitute Fuel

**70** Million Nm<sup>3</sup>

Annual CO<sub>2</sub> Reduction

**174** Thousand tCO<sub>2</sub>

**Tancheon Sewage Heat  
Energy Utilization Business**

Average Expected Sales  
in 2015

**\$ 7.7** Billion KRW

Annual Heat Generation

**200,000** Gcal

Annual Amount of LNG  
Used as a Substitute Fuel

**19** Million Nm<sup>3</sup>

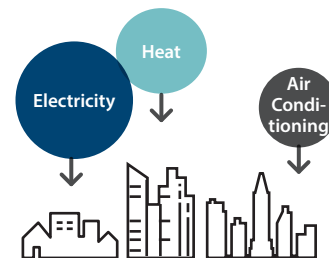
Annual CO<sub>2</sub> Reduction

**44** Thousand tCO<sub>2</sub>

**Fuel Cell, the optimum dispersed generation solution**

Since the unprecedented circular blackout incident, the social impact on centralized power generation system was brought into the limelight and a nation-wide consensus has been reached to introduce dispersed power generation systems to timely respond to power supply problems and solve the instability between electricity demand and supply.

As fuel cells require exceptionally small areas for plant sites and produce quality electricity in an eco-friendly manner, it is widely noted as the most suitable form of dispersed generation for Korea. Fuel cells installed in a city center make it possible to reduce social costs by mitigating conflicts among local residents.

**Fuel cell  
Power  
Plants in  
Urban  
Locations**

- Increase energy independence of major big cities
- Increase energy efficiency
- Alleviate demand and supply imbalance
- More acceptable for stakeholders



# 01 Sustainability Governance

Ethical Management

Financial Soundness

Governance

Sustainability Management System

Sustainability Management Core Issues

Sustainability Management Performance and Plan

Communication with Stakeholders







## Ethical Management

### Ethical Management

POSCO ENERGY implements a range of training and activities on ethic and fair trade so as to help its executives and employees to fully internalize new ethical management culture where the fundamentals and principles count and are cherished.

### Implementation System

To consolidate the CEO's strong commitment on ethical management, the Righteous Management Department is designated to report directly to the CEO, while the Ethical Management Team is responsible for ethical management and fair trade.

### Organization



Participation of ethics training  
by employees

**100%**

No. of participation

**1.6**times/person

### History of Ethical Management in POSCO ENERGY

2007 ~ 2009	→ 2010 ~ 2012	→ 2013 ~ Present
<b>Introduction of Ethical Management</b> <ul style="list-style-type: none"> <li>• Declare ethical management</li> <li>• Establish Code of Ethics</li> <li>• Adopt Programs on Corporate Ethics Autonomous Practice</li> <li>• Introduce holiday present return system</li> </ul>	<b>Expansion of awareness of Ethical Management</b> <ul style="list-style-type: none"> <li>• Company-wide Integrated operation of Programs on Corporate Ethics Autonomous Practice</li> <li>• Establish and operate FCPA guideline</li> <li>• Implement the expanded ethics violation report system</li> <li>• Operate ethics training for Partner companies</li> <li>• On-site ethics training for senior auditors</li> </ul>	<b>Internalization of Ethical Management</b> <ul style="list-style-type: none"> <li>• Revise Code of Ethics to include social responsibility</li> <li>• Inaugurate sexual harassment prevention board</li> </ul>

### Ethical Management Program

**Programs on Corporate Ethics Autonomous Practice** | Since 2010, POSCO ENERGY has operated the Programs on Corporate Ethics Autonomous Practice through which employees voluntarily identify ethical risks of their respective divisions and identify appropriate assignments to prevent unethical behavior under the leadership of the executives of each division. Each division selects and puts into practice more than one ethical assignment from among the ethical violation prevention assignments for improving division-specific ethical risks and any theme practicable in daily life.



Sexual harassment prevention board

**Sexual Harassment Prevention Board** | POSCO ENERGY held a Sexual harassment prevention board on March 2015, participated by the head of Management & Supporting Division, head of Corporate Audit Division, head of Power Plant Development Division, head of Fuel Cell Business Division, Chairmen from councils, and representative of female employees, among others. For strengthening good corporate etiquette and culture, the company plans to hold a quarterly sexual harassment prevention board meeting and conducts sexual harassment prevention training by each division and relevant activities by each council.



Ethical training class with executives

**Ethical Training** | To prevent any unethical behavior, POSCO ENERGY provides all employees with education and training on ethical violation prevention and sexual harassment prevention. The company offers differentiated training for training for the newly employed and existing employees by their positions/duties. We intend to forestall possible unethical behavior in relation with stakeholders by providing Partner companies with ethical training in line with shared growth activities.

## Fair Trade

POSCO ENERGY consistently implements activities to firmly establish a culture to voluntarily uphold fair trade. By promoting fair and free competition, the company ensures that the market will function properly and achieve sound economic development by working to preclude the concentration of economic power.

### Autonomous Fair Trade Compliance Program (CP, Compliance Program)

POSCO ENERGY has adopted and been implementing Autonomous Fair Trade Compliance Program (CP) since 2009. The company has committed CP's operating guidelines to writing and solidified its commitment to autonomous compliance of fair trade by appointing a senior auditor as CP manager, among other activities.

It also conducts various activities to raise awareness of fair trade by providing divisions related to fair trade with a range of training from inside or outside the company, as well as publishing and distributing autonomous CP manuals for employee reference. These efforts and activities have been rewarded with the "A" grade for CP grade evaluation from the Fair Trade Commission.

### Implementation of the Four Guidelines for Fair Subcontract Transactions

POSCO ENERGY has applied the four guidelines for fair subcontract transactions so as to autonomously guard against any possible impediment to fair trade and externally clarified its commitment to autonomous fair trade and shared growth.

#### Organization of Four Guidelines for Fair Subcontract Transactions



### Consistent Activities to raise awareness on Fair Trade

To spread awareness on fair trade, the company provides its employees with various training. POSCO ENERGY's efforts to raise awareness on fair trade are apparent in several actions. Employees whose duties are relevant to fair trade issues are offered internal/external training programs. A group-wise fair trade compliance committee, held on a quarterly basis, shares important internal/external issues on fair trade and inspects/diagnoses the company's performance on fair trade compliance.



Fair trade compliance committee

#### Annual Fair Trade Trainings

	Internal fair trade training	External fair trade training	Other fair trade training
	7 sessions 199 persons	5 sessions 18 persons	19 sessions 148 persons



## Financial Soundness

In spite of heightened expectations on the fully-fledged global economic recovery, the year 2014 unfolded in disappointment. The U.S. was the only country that relished high growth rate whereas the other parts of the world suffered from sluggish economic growth. Unemployment rates increased in the EURO ZONE, there was minus growth in Japan, and economic growth in China was slowing, to cite a few examples. The Korean economy was not an exception. Korea's economic growth continued to decline due to these unfavorable external conditions and reduction of investment by corporations.

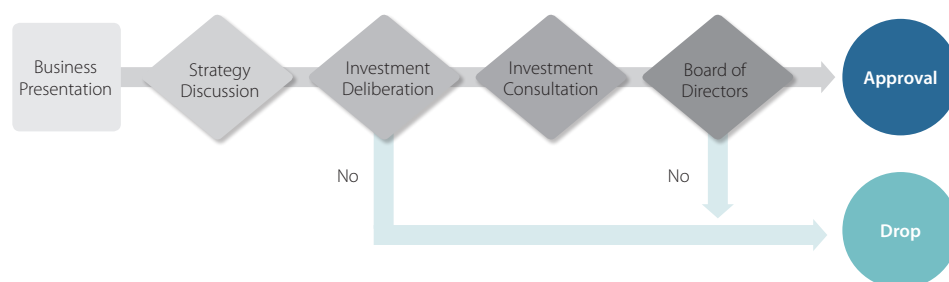
As for the electricity market, the electric power reserve rate has risen in 2014 due to the increase in new generator supply and slowed demand growth driven by the government's policy to tightly manage the power demand. Despite the deteriorated electricity market conditions, POSCO ENERGY achieved sales of 2,598.6 billion KRW and operating profit of 118.7 billion KRW based on consolidated financial statements through stable power supply, the enhanced profitability of Off-gas Combined Cycle Power Plants, and various internal improvement activities.

Based on consolidated financial statements, the total assets of the company at the end of 2014 were 4,991.0 billion KRW, a 19% increase from the previous year. The increase in the corporation assets can largely be attributed to the acquirement of the shares of POSPOWER, as well as further construction of the Incheon LNG Combined Cycle Power Plant (Units 7-9) and Off-gas Combined Cycle Power Plant in Indonesia. Due to increased borrowings from financing the acquisition and construction costs, the total loans have been amounted to 3,424.6 billion KRW, recording a 805.2 billion increase compared to the previous year. The debt to equity ratio has risen by 52% from the year before, resulting in 219%.

### Investment Risk Management

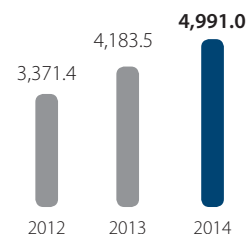
To consolidate the grounds for future growth, POSCO ENERGY is investing in domestic & overseas power business, and new & renewable energy business, comprising photovoltaic power, wind power and fuel cells, etc). Due to the inherent nature of the energy business that requires a tremendous amount of investment over a long period of time, the company establishes and implements an investment deliberation process so as to thoroughly diagnose and analyze any associated risks in advance and evaluate investment feasibility. Firstly, the department in charge of investment proposal shares information on the proposal with relevant departments through a business presentation session to modify and complement the business plan by incorporating various ideas during the session. Secondly, in-house experts in technology, laws and regulations, accounting, finance, etc. participate in each deliberation stage to identify and assess any potential risk elements before reaching a conclusion on whether or not to invest. Even if a proposal is authorized by the deliberations, the department must establish a counter-measurement plan against identified risks and report the results while the investment management departments have to regularly monitor all the proceedings to minimize investment risks. Also, to identify the impact of the investment over the entire POSCO group's financial soundness and strategic consistency, we conduct sufficient discussions and consultations with the mother company, POSCO.

### Investment Deliberation Process

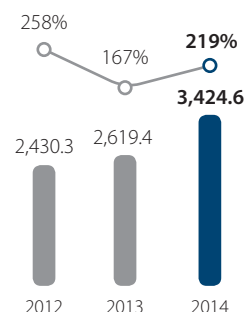


### Financial Position

Total Assets (billion KRW)

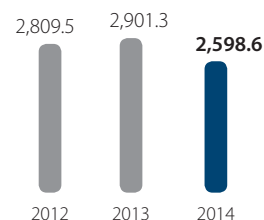


Debt (rate) (billion KRW)

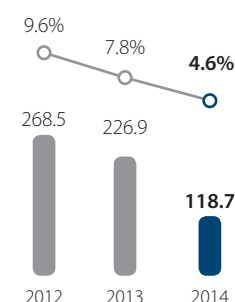


### Profit and loss

Sales (billion KRW)



Operating Profit (rate)  
(billion KRW)



### Financial Structure Improvement

During the past four years, the company has achieved outstanding growth in terms of capacity, assets and profits, thanks to aggressive investments under the favorable electricity market environment and has finished most of the planned major investment projects with the completion of the Incheon LNG Combined Cycle Power Plant units 7~9. The company plans to focus on improving the financial structure by enhancing profitability through optimizing facility operation and cost reduction, as well as by continuing repayment of borrowings.

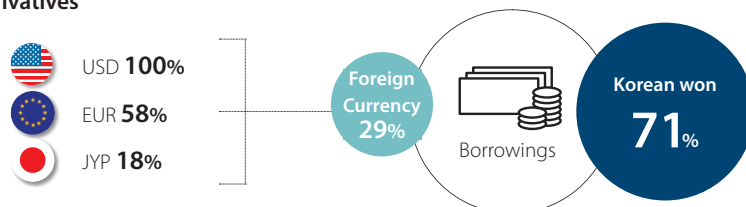
### Financial Risk Management

POSCO ENERGY manages risks effectively by operating a risk management system covering accounting, tax, and treasury. In regard to foreign currency borrowings, we minimize volatilities associated with exchange rates and interest rates by using hedge transactions through derivatives agreements (e.g. Swap, Forwards).

Currency	Amount	Hedge	Percentage
USD (thousand USD)	238,184	238,184	100%
EUR (thousand EUR)	204,567	119,462	58%
JPY (million JYP)	23,717	4,339	18%
conversion to USD, total	685,450	419,757	61%

※ 15% in variable rates, 85% in fixed rates in total foreign currency borrowings

### F/X Derivatives



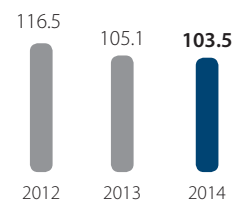
### Credit Ratings

As of April 2015, the domestic rating agencies downgraded POSCO ENERGY's credit rating from AA+ (Stable) to AA+ (Negative) in consideration of the following reasons: decreased profitability caused by deteriorated electricity markets due to surge of electric power reserve rate led by the increase of capacity by newly constructed power plants and the government's attempt to tightly manage the power demand, financial burdens from the investment in the Incheon LNG Combined Cycle Power Plant(Units 5-9) and Gwangyang/Pohang Off-gas Combined Cycle Power Plants and the acquisition of POSPOWER shares during past four years. The rating agencies, however, gave higher appraisal for the company than its main competitors by accounting for POSCO ENERGY's status in the Korean power generation market and its stable profit structure.

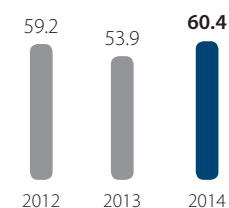
Classification		2013	2014	2015
Korea Investors Service	Corporate bond	AA+(Stable)	AA+(Stable)	AA+(Negative)
	Commercial paper	A1	A1	A1
Korea Ratings	Corporate bond	AA+(Stable)	AA+(Stable)	AA+(Negative)
	Commercial paper	A1	A1	A1
Nice Investors Service	Corporate bond	AA+(Stable)	AA+(Stable)	AA+(Negative)
	Commercial paper	A1	A1	A1

### Key Financial Index

Current Ratio (%)



Total Borrowings and Bonds Payable to Total Assets (%)



## Governance

### Governance

#### Stable Governance

POSCO ENERGY practices responsible and substantial management to meet stakeholders' expectations. The Board of Directors, the highest decision-making body of the company, is fully committed to elevating the value for shareholders and increasing benefits for them.

#### Composition and Procedures of the Board of Directors

As the highest decision-making authority of POSCO ENERGY, the Board of Directors (BOD) consists of three internal directors, two non-executive directors, and one auditor. Internal directors with overall business management expertise and non-executive directors are appointed at the BOD meeting, and a financial expert is appointed as the auditor via a BOD resolution. The appointed directors shall make major decisions on key issues regarding the company management while the auditor plays the role of checking and assessing the performance of directors. The CEO, who is appointed by the BOD, will successively fill the post of BOD chairperson. The BOD approves the resolution on important management issues, and the BOD regulations stipulate that directors who have a special stake in the company should not exercise their voting rights at those particular meetings.

#### Evaluation and Compensation

Evaluation and compensation of the BOD members are determined by an internal merit-based compensation system. Their participation and performance in BOD meetings during the tenure are monitored, and performance compensation is paid after the evaluation of the executives of POSCO family companies.

#### BOD Operation and Major BOD Agenda in 2014

To ensure effective BOD operation, BOD meetings are held on a regular and temporary basis. There were a total of 13 BOD meetings in 2014. The major BOD agendas in 2014 include a total of 30 reported and approved cases: domestic and overseas projects for power generation, new and renewable energy investment, Corporate Social Responsibility (CSR), and risk management. To become a company of sustainable growth, POSCO ENERGY will make the most of BOD meetings to make important decisions to produce desirable outcomes by impartially coordinating and reflecting the opinions of diverse stakeholders.

#### BOD Activities



No. of BOD meetings  
**13** times



No. of approved agenda  
**30** cases

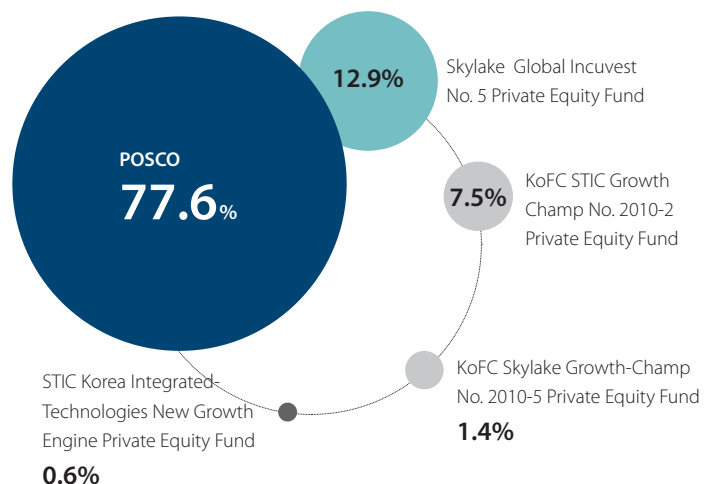


Attendance  
**94.5%**

#### BOD Composition (As of April 2015)

Classification	Name	Position
Internal Directors	Eun-yeon Hwang	CEO
	Chang-dong Shin	Head of Business Development Division
	Tong-wook Shim	Head of Management & Planning Division
Non-executive directors	Jin-il Kim	President of POSCO
	Gyung-chul Gu	Vice President of STIC Investment
Standing Auditor	Seung-hwan Cho	Head of Corporate Audit Division

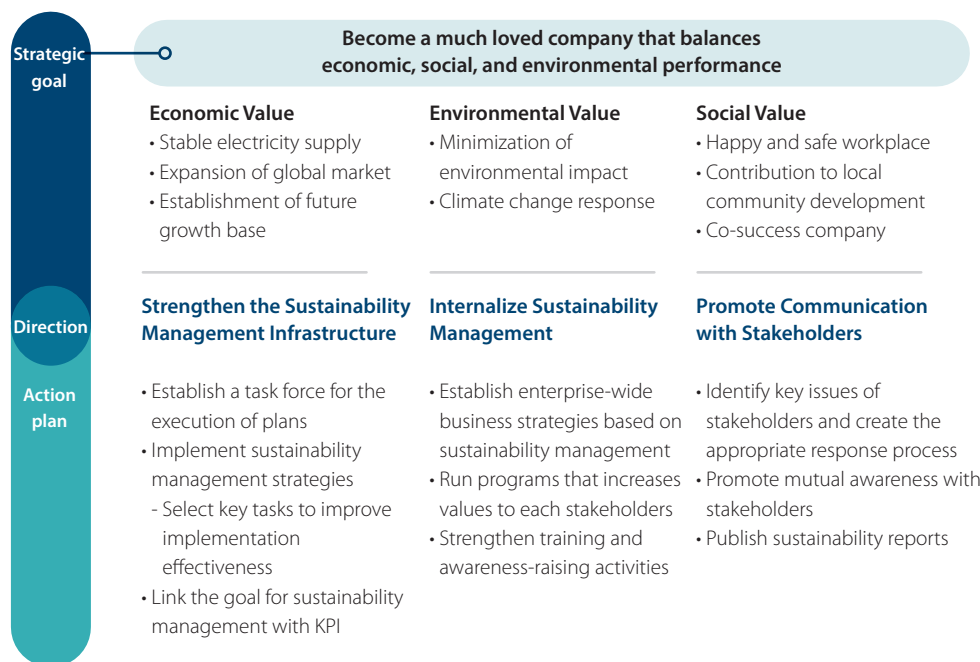
#### Shareholder Status (As of December 2014)



## Sustainability Management System

POSCO ENERGY establishes and runs various sustainability management strategies and action plans in order to share and spread the values of sustainability management throughout the group.

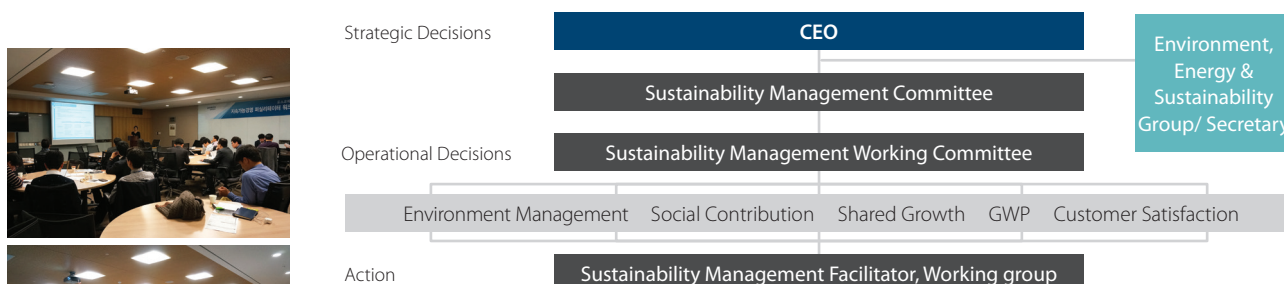
## Sustainability Management Strategy



## Sustainability Management Organization

## Sustainability Management Committee Operation

The Sustainability Management Committee is a company-wide consultative body under the direct control of the CEO for handling overall sustainable management issues. The Sustainability Management Committee has five working groups in the areas of Environmental Management, Social Contribution, Shared Growth, GWP (Great Work Place), and Customer Satisfaction for the purpose of playing the role of sharing relevant issues, ensuring the consistency of sustainable management activities, and finally expanding consensus about those issues.



Sustainability management  
facilitator workshop

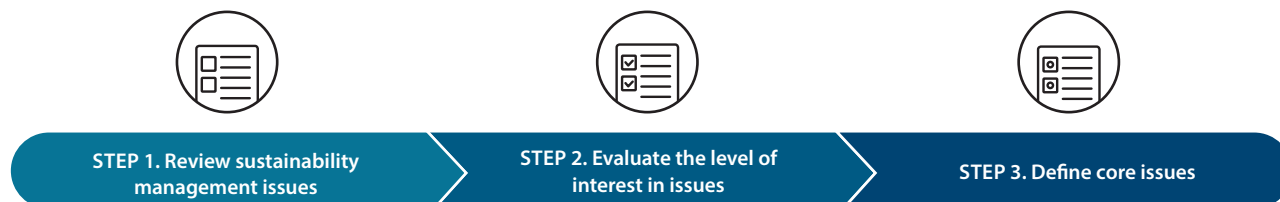
### Sustainability Management Facilitator

To improve work efficiency and to raise internal awareness, POSCO ENERGY installed the system of sustainability management facilitators composed of senior-level employees from relevant divisions. Facilitators are responsible for identifying sustainability management issues in respective fields of environment, the needs of stakeholders, and operating implementation tasks. They receive quarterly training offered by external experts to further develop their capabilities.

## Sustainability Management Core Issues

Through materiality evaluation, POSCO ENERGY identifies the expectations and issues of stakeholders and induces the core issues of sustainability management that should be reflected in its management activities. The company discloses the extensive information about its activities and performance on core issues in reports.

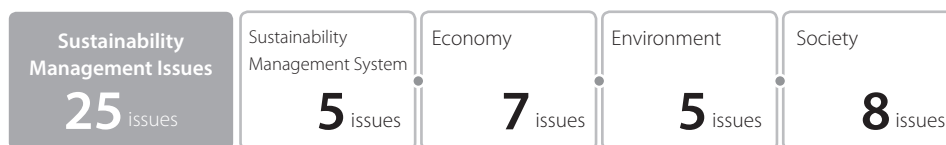
### Materiality Evaluation Process



#### STEP 1

##### Review sustainability management issues

The company identified 25 sustainability management issue pool by examining and reviewing domestic and foreign sustainability management standards (GRI, EUSS, ISO26000, UNGC) and Peer Group benchmarking in and out of Korea (analysis of key activities and issues), media analysis, and advice from sustainability management experts.



#### STEP 2

##### Evaluate the level of interest in issues

To examine the level of interest and social concern on 25 sustainability management issues and possible impacts on business, the company evaluates the level of interest by reviewing the details of each item of evaluation before matching issues with details to regulate and score points.

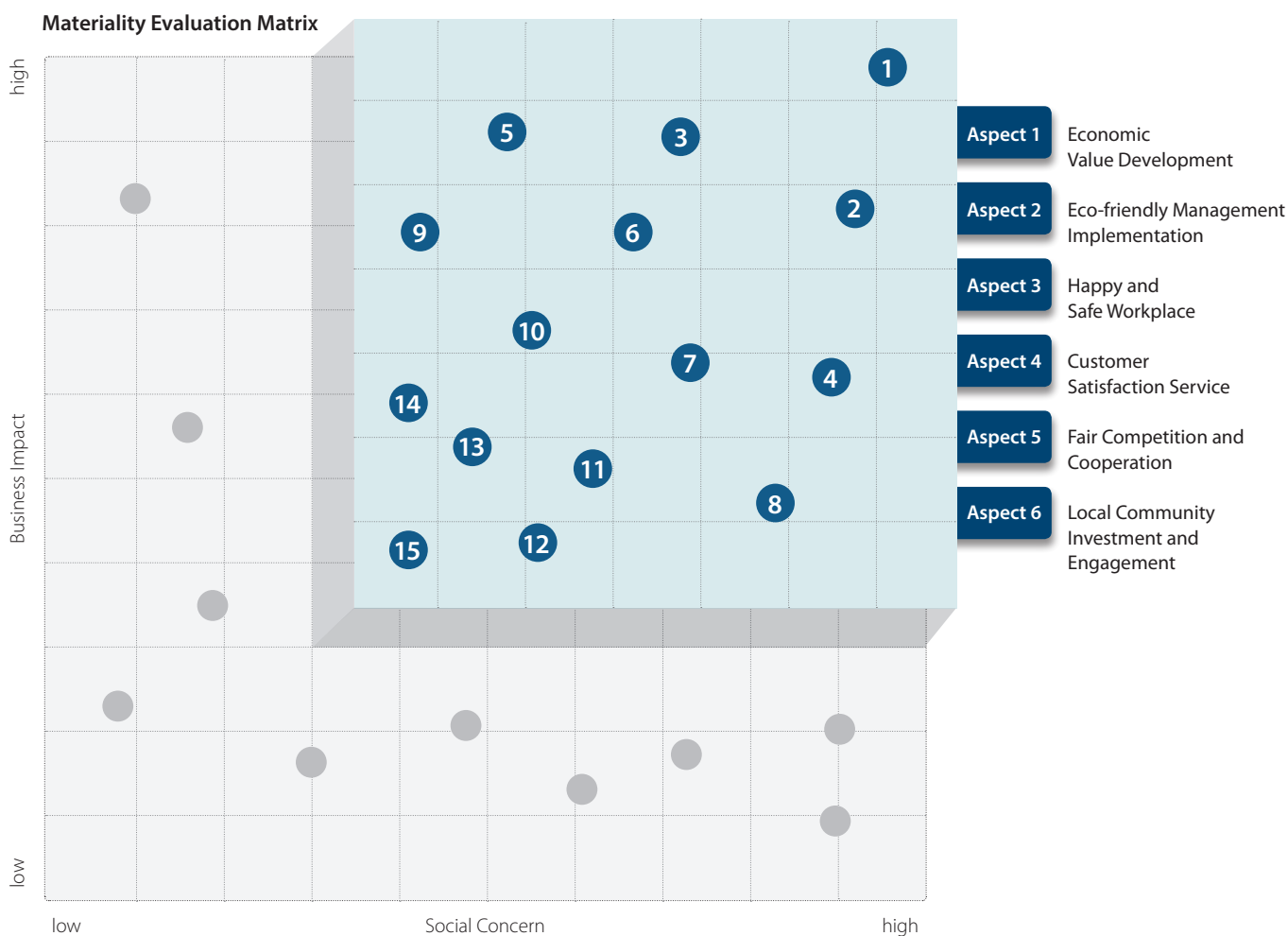
Evaluation items		Details
<div> <div> <b>Social Concern</b>            Measure the importance of sustainability management issues in objective perspective from an outsider's position           <div> <div>Media Exposure Frequency</div> <div>Peer Group</div> <div>Global Standards</div> </div> </div> <div> <div>Strategic Relevance</div> <div>Financial Impact</div> <div>Risk &amp; Reputation</div> </div> <div> <b>Business Impact</b>            Measure the importance of issues regarding relevant to strategies, risk management, and business-oriented perspective         </div> </div>		
Media		Quantitative evaluation of media exposure frequencies through media analysis (609 news items featured by media in 2014)
Peer Group		Major activities and issues of excellent companies in the same industry (10 overseas & 5 domestic companies)
Global Standard		GRI G4, GRI electricity industry issues, ISO26000, etc.
External Stakeholder		Conduct a survey participated by external stakeholders
BOD Agendas		BOD agendas for 2014
Strategic Tasks		Major implementation tasks per group
Business Report		Sustainability management-related activities within business report
Web-zine		Contents of Web-zine issued 2014
Executives & Employees		Conduct a survey participated by management and employees











### Define Core Issues

Core issues were identified by mapping the analysis results of social concern and business impact in a matrix. The company extensively discloses the Top 15 issues obtained from the materiality evaluation, which in turn are further classified into six different aspects: Economic Value Development, Eco-friendly Management Implementation, Happy and Safe Workplace, Customer Satisfaction Service, Fair Competition and Cooperation, and Local Community Investment and Engagement.



Aspect	No	Rank	Issue	Page	Aspect	No	Rank	Issue	Page	
1 Economic Value Development	1	1	Strengthening growth engines	27	4 Customer Satisfaction Service	10	14	Customer satisfaction management	46	
	2	6	Improving productivity and management efficiency	30	5 Fair Competition and Cooperation	11	15	Reinforce shared growth activities	49	
	3	7	Strive to produce highly efficient electricity	31		6 Local Community Investment and Engagement	12	2	Operate social contribution program with local community development	53
2 Eco-friendly Management Implementation	4	8	Implementation of new and renewable energy business	34	Sustainability Management System		13	3	Pursue ethical management and fair trade	14
	5	10	Response to climate change	33			14	4	Transparent and stable Governance	18
3 Happy and Safe Workplace	6	11	Minimizing generation of pollutants	36		15	12	Expand stakeholder communication	23	
	7	5	Create great workplace	39						
	8	9	Recruit quality talent and strengthen the competitiveness	41						
	9	13	Safety and Health Management	43						

## Sustainability Management Performance & Plan

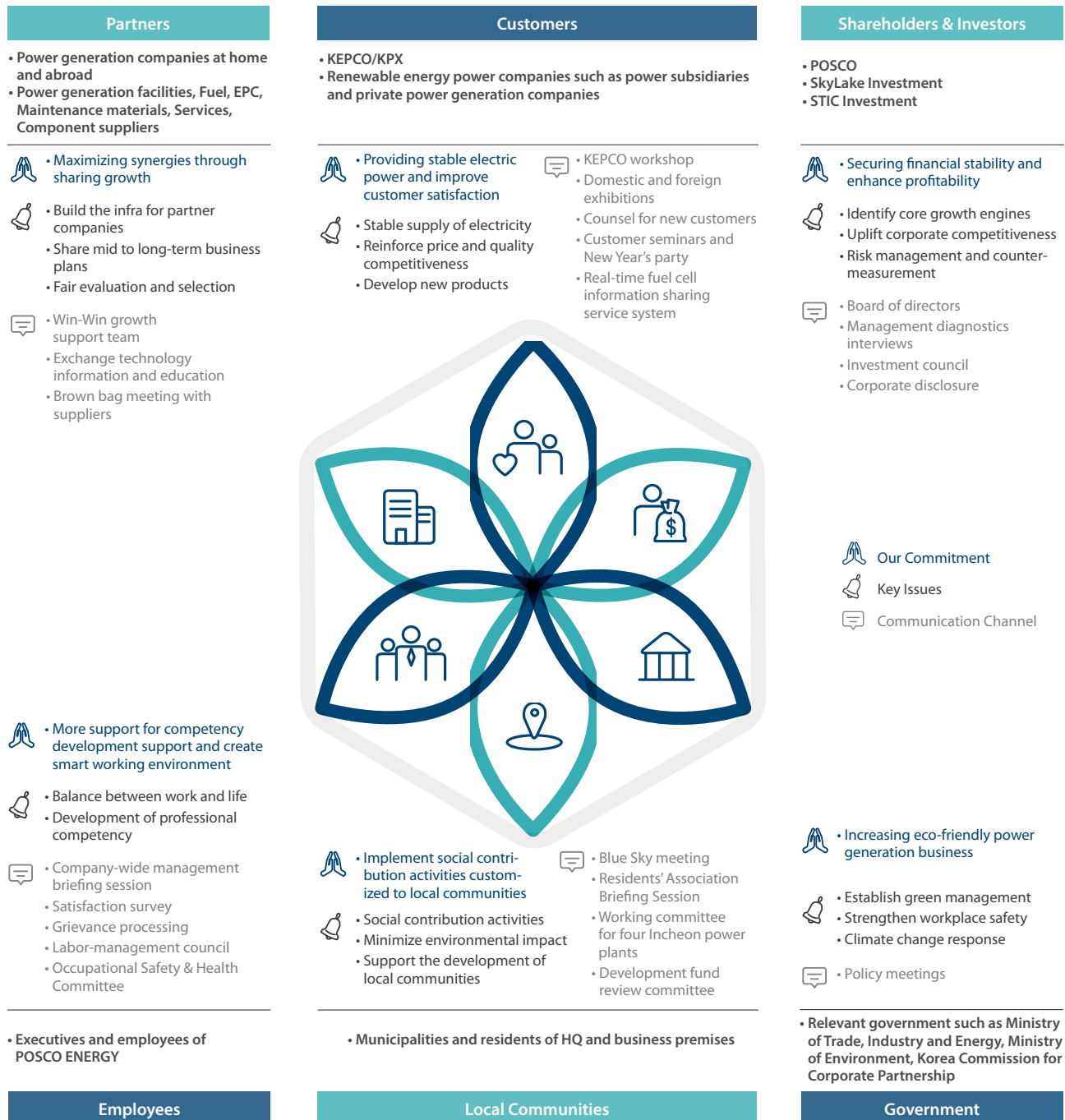
Aspect	Issue	Achievement in 2014	KPI in 2014	Plans for 2015
Economic Value Development 	Strengthening growth engines	<ul style="list-style-type: none"> <li>Mong Duongll Coal Power Plant Units 1-2 in Vietnam</li> <li>Sealed key business agreement regarding CHP5 Coal-fired Cogeneration Power Project in Mongolia</li> <li>Fuel cell selected as the national future growth engine Flagship Project and six core technologies to respond to climate change</li> <li>Secure growth basis with new project launch and technological development</li> </ul>	Overseas business Generating capacity 1,400MW Accumulated supply capacity of fuel cell of 149.2MW	<ul style="list-style-type: none"> <li>Expand overseas IPP and business in stronghold countries</li> <li>Achieve 100% facility localization with the construction of cell manufacturing plants</li> </ul>
	Improving productivity and management efficiency	<ul style="list-style-type: none"> <li>Successful implementation of PI3.0 and company-wide standardization of work</li> <li>Launched company-wide integrated management operation system</li> </ul>	Standardization of work 100%	<ul style="list-style-type: none"> <li>Optimize company-wide integrated management operation system</li> <li>Establish performance-generating innovative culture</li> </ul>
	Strive to produce highly efficient electricity	<ul style="list-style-type: none"> <li>Contributed to stable electricity supply by minimizing generator breakdown</li> <li>Optimized the construction of Incheon LNG Combined Cycle Power Plant Units 7-9</li> </ul>	Generating capacity 4,025MW Sales amount 2.6trillion KRW	<ul style="list-style-type: none"> <li>Achieve zero forced outage of power plants</li> <li>Increase operating rates with stabilized facilities</li> </ul>
Eco-friendly Management Implementation 	Response to climate change	<ul style="list-style-type: none"> <li>Monitored and enacted pre-emptive response to climate change</li> <li>Energy-saving through facility efficiency improvement and waste heat recovery</li> </ul>	Energy saving 7,515MWh	<ul style="list-style-type: none"> <li>Effective response to climate change policies and institutions</li> <li>Minimize risks with the proper response to climate change</li> </ul>
	Implementation of new and renewable energy business	<ul style="list-style-type: none"> <li>Completion of Shinan Solar Power Plant #3 Phase</li> <li>Construction of Tanchon Sewage Heat Energy Utilization Facility</li> </ul>	Solar power plant 14.5MW	Expand new and renewable energy generation projects in and out of Korea with competitive advantages
	Minimizing generation of pollutants	<ul style="list-style-type: none"> <li>Optimized environmental management system (ISO14001) and obtained certifications in all business sites</li> <li>Minimized environmental impacts by reducing generation of pollutants</li> </ul>	NOx emission intensity 0.13kg/MWh Amounts of environmental investment 9,672million KRW	<ul style="list-style-type: none"> <li>Sharpen competitive edge of environmental management and monitor the response to environmental regulations</li> <li>Stabilize facility operations with preventive maintenance for environmental facilities</li> </ul>
Safety and Health 	Create great workplace	<ul style="list-style-type: none"> <li>Created happy workplace through trust-based communication and field-oriented management</li> <li>Promote the Thanks-Sharing Campaign and Thanks-Sharing broadcasting</li> </ul>	Happiness Index 77points	<ul style="list-style-type: none"> <li>Implement organizational culture customized for employees</li> <li>Improve the quality of life for employees through continued operation of family-friendly system</li> </ul>
	Recruit quality talent and strengthen the competitiveness	<ul style="list-style-type: none"> <li>Strengthened training system to improve job competency and work engagement</li> <li>Advanced the working methods based on PI3.0 &amp; SWP</li> </ul>	Total training costs 940million KRW	<ul style="list-style-type: none"> <li>Implement a roadmap to reinforce job competency</li> <li>Timely recruitment of experts in the relevant fields with business expansion</li> </ul>
	Safety and Health Management	<ul style="list-style-type: none"> <li>Obtained level P for the process safety management</li> <li>Received Safety Award for POSCO Family</li> <li>Continued facility enhancement and improved safety work process</li> </ul>	Absenteeism 0.30%	<ul style="list-style-type: none"> <li>Continue to operate no-accident plants with reinforced safety activities</li> <li>Get familiarized with Felt Leadership that calls for action</li> <li>Promote strengthening activities for safety competency of employees</li> </ul>
Customer Satisfaction Service 	Customer satisfaction management	<ul style="list-style-type: none"> <li>Expanded service technology competency and reinforced operation systems</li> <li>Established real-time data sharing service system for fuel cell</li> <li>Strengthened customer satisfaction activities and stabilized operational quality</li> </ul>	Operation rate 96%	<ul style="list-style-type: none"> <li>Stabilize operation quality by strengthened service performance and improving usage rate</li> <li>Achieve Zero-facility breakdown rate</li> <li>Generate new source of profits by improving LTSA product model</li> </ul>
Fair Competition and Cooperation 	Reinforce shared growth activities	<ul style="list-style-type: none"> <li>Implemented shared growth activates based on Partner companies' needs</li> <li>Strengthened the support programs for secondary Partner companies</li> <li>Eased payment conditions through broadened criteria to be eligible as SMEs</li> </ul>	Benefit Sharing 700million KRW	<ul style="list-style-type: none"> <li>Strengthen suppliers' competitiveness with shared growth activities</li> <li>Operate performance sharing process based on co-prosperity and cooperation</li> <li>Improve communication with Partner companies by diversifying channels</li> </ul>
Local Community Investment and Engagement 	Operate social contribution program with local community development	<ul style="list-style-type: none"> <li>Expanded the areas to benefit from Energy Donation Projects</li> <li>Made indirect job creation through the inclusion of self-support groups in construction works</li> <li>Provided employees with opportunities to participate in talent donation activities</li> <li>Received merit award by Incheon city in recognition of company's care for neighbors</li> </ul>	Social contribution activities hours 24.9hr/person Participation rate of the 1% sharing fund 90%	<ul style="list-style-type: none"> <li>Strengthen the representative project related to works</li> <li>Promote employee volunteer service programs</li> <li>Substantiate mentoring for university students Volunteer Corp.</li> <li>Increase the participation rate of the 1% sharing fund and raise donator satisfaction</li> </ul>

## Communication with Stakeholders

Through various channels, POSCO ENERGY gathers the opinions and suggestions of stakeholders and identifies key issues to reflect in its sustainability management strategies and activities

### Key Stakeholders and Communication Channels

POSCO ENERGY has defined its key stakeholders into six groups: shareholders and investors, the government, local communities, employees, partners, and customers. Accordingly, the company established different channels customized to different stakeholders characteristics. The company utilizes various communication channels in order to identify the key interests and issues of each stakeholder group, thereby effectively responding to each stakeholder group's specific needs.





## 02 Stakeholder Insight

- Aspect 1 Economic Value Development
- Aspect 2 Eco-friendly Management Implementation
- Aspect 3 Happy and Safe Workplace
- Aspect 4 Customer Satisfaction Service
- Aspect 5 Fair Competition and Cooperation
- Aspect 6 Local Community Investment and Engagement





# 1

ASPECT

## Economic Value Development



### Understanding of Aspect

POSCO ENERGY implements a range of activities to ensure long-term and stable provision of electricity in line with the electric power stability policy promoted by the government to respond to the growth of domestic industries and the increase in electricity demands from the private sector. The company adopts and practices effective and value-centered activities in every stage of energy production to prepare a platform to reach new growth opportunities while contributing to the establishment of the nation-wide electricity infrastructure to ensure stable electricity supply. In an effort to ensure future growth, the company also strives for global market penetration and R&D activities.

Installed Generating Capacity

**4,025<sub>MW</sub>**

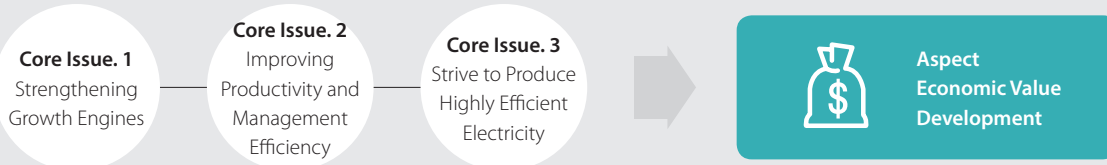
Fuel Cell Supply

**149.2<sub>MW</sub>**



### Introduction to Core Issues

POSCO ENERGY reconfirms the areas of keen interest to stakeholders and determines the direction to lead its strategic efforts and future tasks to pursue. Through a materiality evaluation process, the company selected and classified four core aspects including "Strengthening Growth Engines", "Improving Productivity and Management Efficiency", "Strive to Produce Highly Efficient Electricity", and "Economic Value Development".



### Key Achievements and Goals

POSCO ENERGY seeks to increase effectiveness throughout the entire stages of energy production with the establishment of the company-wide integrated management system and management innovation activities. Based on these efforts, the company intends to pursue value-centered management through which the existing core competitive advantages are to be maintained with heightened profitability. We also commit the utmost efforts to achieve growth platforms through various R&D activities, search for overseas business opportunities, and create new momentum for our next leap forward.

Classification	Achievement in 2014	Plans for 2015
Strengthening Growth Engines	<ul style="list-style-type: none"> <li>• Mong Duong II Coal Power plant (Units 1-2) in Vietnam</li> <li>• Sealed key business agreement regarding CHP5 Coal-fired Cogeneration Power Project in Mongolia</li> <li>• Fuel cell selected as the national future growth engine Flagship Project and six core technologies to respond to climate change</li> <li>• Secure growth basis with new project launch and technological development</li> </ul>	<ul style="list-style-type: none"> <li>• Expand overseas IPP and business in stronghold countries</li> <li>• Achieve 100% facility localization with the construction of cell manufacturing plants</li> </ul>
Improving Productivity and Management Efficiency	<ul style="list-style-type: none"> <li>• Successful implementation of PI3.0 and company-wide standardization of work</li> <li>• Launched company-wide integrated management operation system</li> </ul>	<ul style="list-style-type: none"> <li>• Optimize company-wide integrated management operation system</li> <li>• Establish a performance-generating innovative culture</li> </ul>
Strive to Produce Highly Efficient Electricity	<ul style="list-style-type: none"> <li>• Contributed to stable electricity supply by minimizing generator breakdown</li> <li>• Optimized the construction of Incheon LNG Combined Cycle Power Plant Units 7-9</li> </ul>	<ul style="list-style-type: none"> <li>• Achieve zero forced outage of power plants</li> <li>• Increase operating rates with stabilized facilities</li> </ul>

## Strengthening Growth Engines

### Securing Future Competitiveness

As the first and the largest private power generator company in Korea, POSCO ENERGY is stepping forward to become a global total energy company.

### Implementing Strategies

POSCO ENERGY concentrates its capability to grow into a global total energy company and lead the industry with its accumulated experience and know-how, seeking to attain continued growth.

Become a global total energy company	
<b>Build an optimum business portfolio</b>	Create a balanced portfolio among domestic and overseas IPP, coal plants, and LNG plants
<b>"Future growth engine flagship project" for the national creative economy business</b>	Build fuel cell business characterized by eco-friendly, high efficiency
<b>New and renewable energy business serving as growth business</b>	Prepare growth business with "New and renewable + ESS + Smartgrid" fusion model and technology development
<b>Reinforce family synergy</b>	Concentrate Family capabilities to sharpen competitive edge of value change for energy business

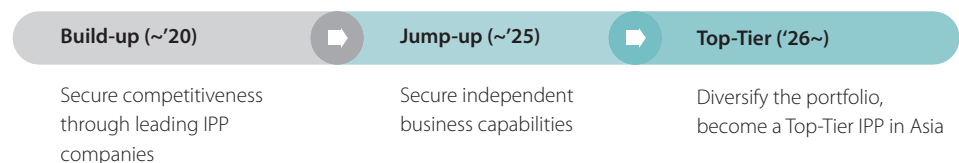


### Overseas Business Development

Based on globally accumulated operating and management (O&M) know-how and technologies of forty years, POSCO ENERGY pursues and conducts its business in various parts of the world. We plan to grow into a global company by accelerating our efforts to penetrate overseas markets and also pursue shared growth with countries where we operate by means of increased power supply and stable job creation. Our active overseas expansion will further help us to become an internationally recognized global total energy company.

### Implementing Strategy

Geared toward attaining the status as one of the "Asian Top-Tier IPP companies", we are pushing overseas businesses forward to secure total 4.6GW capacity by 2025.



## Current Implementation

At present, we hold an Off-gas Power Plant in Indonesia and a Coal Power Plant in Vietnam commercial operation. We seek to build a CHP5 Coal-fired Cogeneration Power Plant in Mongolia. Later, we plan to expand overseas projects by entering the Middle East, Southeast Asia, and Central and South America with coal thermoelectric power generation and gas power generation plants.



Off-gas Power Plant in Indonesia



Coal Power Plant in Vietnam



CHP5 Coal-fired Cogeneration Power Plant in Mongolia

## R&D and Investment

Classification	R&D Workforce (person)	R&D Investment (100 million-KRW)
2012	69	183
2013	65	161
2014	126	251

### From R&D technologies to commercialized technologies!

POSCO ENERGY aims to turn R&D activities into commercialized technologies. We are currently engaged in developing the connection technology between building and new and renewable energy with energy storage devices, and sealed MOUs with Korea District Heating Corp (KDHC) and GS Power so as to reuse unutilized heat from plants (efficiency improvement). We also maintain good performance on the commercialization of technologies. For instance, we have sold middle-low temperature turbines, which are under joint-development with an SME, to a collective energy business.

## Value Creation for Generation Business through R&D Activities

POSCO ENERGY sets the overarching R&D directions toward the value creation for generation business through R&D activities, securing new growth engines, and reinforces its research competency to attain a profit center. Under the umbrella of the technology strategy center, the company has professional research personnel from the Green Energy Research Center, Technology Plan Group, and Future Technology Information Group. Launched in 2014, the Future Technology Information Group identifies and discovers promising new business areas and has laid a foundation for counter-measuring climate changes by finding and examining domestic and overseas energy industries and technology trends.

### Improving Efficiency in Power Generation Business and Leading New Growth Areas

To assume a leading role in technology development in the energy field, the company analyzes mega trends and discovers R&D performance components in consideration of the relevance to the current business portfolio. We identify research projects that could contribute to increased profitability for current power generation businesses, waste-to-energy that utilizes industry waste heat and waste sources, and better responses to energy demand/dispersed generation. By doing so, we consolidate a basis for securing middle-and-long-term growth engines through active R&D activities.

#### Providing the Value of the Generation Business and Securing New Items for Future Growth

##### Details on promotion directions

- Improve profitability for the existing generation business
- Transform industrial waste heat and waste source into energy
- Respond to energy demand/the needs for dispersed generation

##### R&D Performance Components

- Develop heat pump utilized high efficiency system
- Develop middle-low temperature turbines, waste source-to-gas technology
- Develop energy storage device system



## Lead Fuel Cell Energy Market

### Future energy source that is able to pre-empt technology lead

POSCO ENERGY has singled out fuel cells as a future growth engine business since 2003 and made concerted efforts in technology development and the localization of facilities. Aside from the successful manufacturing of BOP and stack, we also established our own service networks and independent construction system to ensure localization of all facilities including cells. We also made sure to pour continued investment in R&D and the cultivation of expert manpower for product performance enhancement and service reinforcement. Based on the fuel cell business, POSCO ENERGY assumes leadership in stabilizing the national electricity system through the provision of new and renewable energy and dispersed power generation supply, while carrying out various efforts to create national wealth by leading the global fuel cell market.

### Fuel Cell Supply

The company has installed and operates fuel cells, a total 149.2MW in 20 fuel cell energy Power Plants fuel cells, for generation. The company has also set one for building, through which it can respond to RPS (Renewable Portfolio Standard) contributes to the green growth. We plan to develop products that will apply fuel cells to create new added values and to penetrate overseas markets.

### Fuel Cell, the Best Dispersed Generation Solution



**Efficiency** Top level efficiency in existing power generation facilities



**Convenience** Easy to install with high spatial efficiency



**Always** Produce electricity 24 hours a day, 365 days a year



**Direct** More economical as it directly produces/ provides electricity where it is needed

### Fuel Cell Supply in Korea

**149.2MW**

20 stations in operation



**What happens if we install fuel cells that can generate 2.5MW?**

- Equivalent to the planting of 45,000 trees
- Equivalent to cutting down the amount of NOx emitted from 1,500 vehicles



Pohang Fuel Cell Plant "World's largest, First in Asia Fuel Cell Manufacturing Plant"

### Establishment of Independent Business System

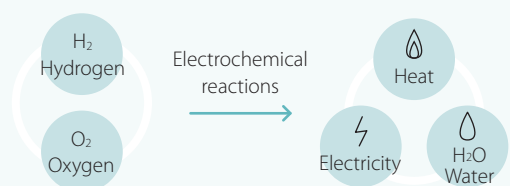
POSCO ENERGY strives to build an independent business infrastructure for fuel cells. Since the establishment of a strategic alliance with Fuel Cell Energy (FCE) in the U.S.A., the company has constructed plants for BOP in 2008 and Stack in 2011, and the construction of the cell manufacturing plant in 2015 marks 100% localization of fuel cell facilities. In addition to the sizable cost-reduction effects expected from the localization, this realizes a virtuous cycle that expands the supply chain, including a number of domestic SMEs. This is an exemplary case of mutual cooperation in the company's business implementation process.

### Reaching the National-wide Consensus on Fuel Cell Supply

So far, POSCO ENERGY has pondered over the possible problems of the lopsided provision of power supply relying on large-scale power generation sources and the consequences to society. The company has thus tried to build a consensus on the necessity of fuel cell supply. Backed by such efforts, the government designated fuel cells as one of the six core technologies against climate change in the 11th National Science & Technology Council held on July 2014, promising that it would provide a policy-based platform to foster the fuel cell industry through the creative economy flagship project in 2015. In addition, the National Assembly and other prominent groups showed ardent interest in fuel cells, further justifying the needs for fuel cell supply.

### Principle behind Power Generation of Fuel Cell

Electricity and heat energy is produced by the electrochemical reactions between hydrogen and oxygen. An electron is separated from hydrogen and then moves to where oxygen is through electrolytes. The movement of the separated electron generates electricity, and the hydrogen and electron that pass through electrolytes and wires encounter oxygen, thus turning into water and producing heat.



## Improving Productivity and Management Efficiency

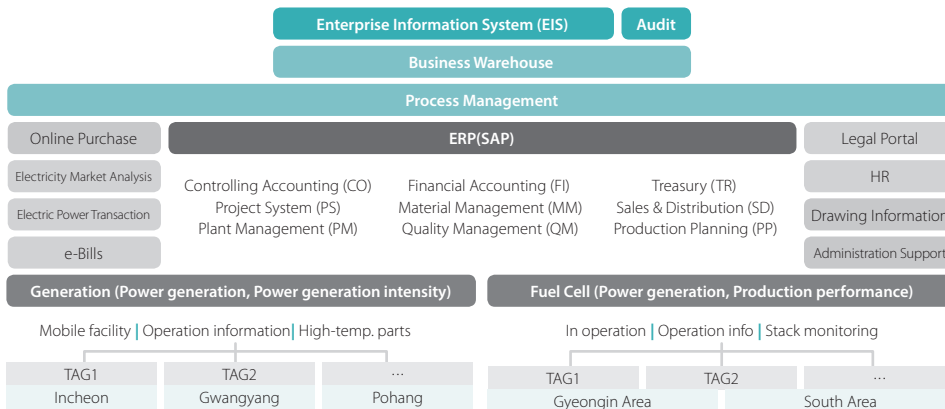
### Establishment of company-wide integrated management operation system

POSCO ENERGY has completed its company-wide innovation program, the "PI3.0 project" implemented since 2012 and launched the company-wide integrated system in July, 2014. The system enables systematic operation of the work and tasks of the entire company to facilitate a rapid decision-making process by the management. It achieves more efficient management by enabling executives and employees to focus on high value-added jobs.

### Overall re-design of process through PI (Process Innovation)

PI enables POSCO ENERGY to check all tasks of the entire company encompassing sales, account settlement, manufacturing, prime costs, purchase, and payment on a real-time basis. It could be matched work and process by standardizing the way jobs are conducted. In addition, the operation of the company-wide integrated management system makes it possible for the company to manage generation costs in real-time, the first for power generation companies.

### Organization of company-wide integrated management operation system



### Implanting Performance Generating Innovative Culture

As a part of the POSCO Family, POSCO ENERGY is committed to the realization of the motto, "POSCO the Great" and subsequently takes the lead in establishing a performance generating innovative culture with the introduction of: PWS(PJT- based Working System) to improve profitability, QSS+ (Quick Six Sigma) for goal-oriented on-site activities, and SWP(Smart Work Place) for advanced methods of working.

### Projects for Profitability Improvement

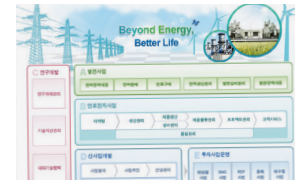
POSCO ENERGY explores and identifies promising new profitable projects through encouraging employees to offer creative ideas and suggestions. The employees' collective intelligence produced 219 ideas in an in-house competition, and workshops collected a total of 18 profitability enhancement projects. It is expected that the company would enjoy about 103.6 billion KRW in financial benefits by the implementation of these projects in terms of new business developments. POSCO ENERGY further motivates employees to propose more ideas by rewarding idea-makers of the selected projects and participants.

#### POSCO ENERGY to Meet Tomorrow on Today

POSCO ENERGY has published a book titled, "POSCO ENERGY to Meet Tomorrow on today". The book features various aspects and events of the company, including the launch of the PI3.0 Project, company-wide job innovation efforts pursued and participated by all executives and employees, master plan, establishment of integrated system, expected effects, success factors, etc., contributing to raising awareness of Process Innovation (PI). POSCO ENERGY plans to donate all proceeds raised by the sales of this book to our neighbors in need.

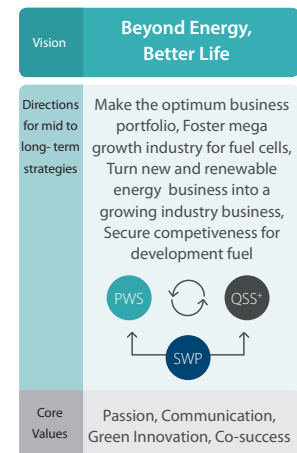


Launch of company-wide integrated system



Company-wide process management system

### Innovation Directions



## Strive to Produce Highly Efficient Electricity

### LNG Combined Cycle Power Plants

POSCO ENERGY is the nation's first and largest private power generator providing 16.5% of the electricity to metropolitan areas. With the operation of the Incheon LNG Combined Cycle Power Plant, the company offers stable supply of electricity, promptly responds to volatile electricity demands, and plays a significant role in maintaining system stability and frequencies.

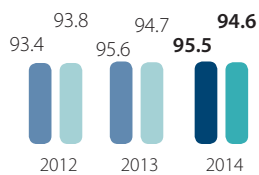
Classification	Units 3-4	Units 5-6	Units 7-9
Capacity	900MW	1,252MW	1,260MW
Commencement of commercial operation	#3('99) #4('01)	#5('11.2) #6('11.6)	#7('14.7) #8('14.10) #9('15.1)
Combined facility composition	G/T 6 units: 600MW S/T 2 units: 300MW	G/T 4 units: 812MW S/T 2 units: 440MW	G/T 3 units: 825MW S/T 3 units: 435MW



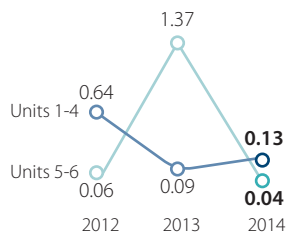
Incheon LNG Combined Cycle Power Plant

#### Availability (%)

■ Units 1-4 ■ Units 5-6



#### Forced Outage Rate (%)



Incheon LNG Combined Cycle Power Plant Units 7-9

#### Incheon LNG Combined Cycle Power Plant Power generation efficiency of Units 7-9

55.5%

High heat value,  
Based on generation



### Optimization of Facility Operation

#### Zero Forced Outage to Enhance Profitability

To prevent the occurrence of breakdowns and maintain optimum conditions in facilities, POSCO ENERGY regularly carries out facility monitoring and close-checkups, following the inspection checklist in accordance with the maintenance cycle. The regular preventive maintenance plan helps in reducing power generation costs as it removes any factors that hinder facility performance and prevents abrupt shutdowns from occurring while eliminating any utility waste for electricity production.

#### Strengthening Operation Workforce Competencies

As a peak load station, the LNG Combined Cycle Power Plant requires a high level of operational skills due to its more frequent operation and suspension. Based on 40 years' experience in power plant operations, POSCO ENERGY obtains a sufficient number of expert manpower, operation, and maintenance know-how and improves the soundness of the facilities through cooperation among the power-generation operation, technology, and maintenance divisions. It also reinforces response to emergencies in a timely manner by implementing training designed to develop operating skills.

### Improving Power Generation Efficiency

#### Activities to Improve Efficiency of Power Generation Facilities

To identify improvement opportunities through systematic performance management, POSCO ENERGY is engaged in several activities: establishing a performance control system, enhancing activities for betterment, and heightened performance control capabilities. As a part of these enhancement activities, the company retrieves waste heat generated from gas turbines to be used for steam turbines, thereby raising generator outputs. The cleaning of gas turbine compressors also helped in minimizing performance degradation. We plan to apply high-efficiency filters to gas turbines to reduce dust concentrations in the air flowing into the gas turbines. This is part of our efforts to achieve more efficient and effective operation of the high-efficiency power plant. Furthermore, we regularly hold consultation meetings with generator facility manufacturers and power generation companies that use the same facilities to exchange information and technologies to make them more effective.

#### Deploying high-efficiency Power Generation Facilities

To contribute to the amelioration of national resource efficiencies through improved power generation capabilities, the company completed the construction of Units 7 to 9 equipped with cutting-edge gas turbines and put them in operation. Units 7 to 9 are the highest power generation facilities in Korea, marking about a 6% higher power generation efficiency on average than those of the existing LNG Combined Cycle Power Plants in Korea.

# 2 ASPECT

## Eco-friendly Management Implementation



### Understanding of Aspect

As increasing interest to the response to climate change has been an important topic of interest, the Korean government has set the national greenhouse gas reduction target to 30% below BAU(Business As Usual) projected emissions in 2020. And domestic environmental regulations and laws have gradually become more stringent. In response to the changing business environment, POSCO ENERGY actively pursues new and renewable businesses such as fuel cell, photovoltaic power, and wind power while it takes measures to reduce greenhouse gas emissions. Furthermore, we're operating eco-friendly plants by minimizing pollutants released.

Energy Saving

**7,515 MWh**

NOx Emission Intensity

**0.13 kg/MWh**



### Introduction to Core Issues

POSCO ENERGY confirms the areas of interest to stakeholders and determines the direction to lead its strategic efforts and future tasks to pursue. Through a materiality evaluation process, the company selected and classified three core aspects including "Response to Climate Change", "Implementation of New and Renewable Energy Business", and "Minimizing Generation of Pollutants" under the "Eco-friendly Management Implementation" aspect in terms of environmental management and response to climate change.

**Core Issue 4**  
Implementation of  
New and Renewable  
Energy Business

**Core Issue 5**  
Response to  
Climate Change

**Core Issue 6**  
Minimizing  
Generation of  
Pollutants



**Aspect**  
**Eco-friendly Management**  
**Implementation**



### Key Achievements and Goals

POSCO ENERGY is committed to finding and expanding its growth potentials in eco-friendly energy business through continued investment and R&D efforts in the field of environment. We will strive to become a leading enterprise in the field of eco-friendly energy to effectively respond to climate change with strategies to tackle greenhouse gas problems. We will also establish an environmental management system to minimize adverse environmental impacts.

Classification	Achievement in 2014	Plans for 2015
Response to Climate Change	<ul style="list-style-type: none"> <li>Monitored and made a pre-emptive response to climate change</li> <li>Energy-saving through facility efficiency improvement and waste heat recovery</li> </ul>	<ul style="list-style-type: none"> <li>Effective response to climate change policies and institutions</li> <li>Minimize risks with the proper response to climate change</li> </ul>
Implementation of New and Renewable Energy Business	<ul style="list-style-type: none"> <li>Completion of Shinan Solar Power Plant #3 Phase</li> <li>Construction of Tanchon Sewage Heat Energy Utilization Facility</li> </ul>	<ul style="list-style-type: none"> <li>Expand new and renewable energy generation projects in and out of Korea with competitive advantages</li> </ul>
Minimizing Generation of Pollutants	<ul style="list-style-type: none"> <li>Optimized environmental management system (ISO14001) and obtained certifications in all business sites</li> <li>Minimized environmental impacts by reducing generation of pollutants</li> </ul>	<ul style="list-style-type: none"> <li>Sharpen competitive edge of environmental management and monitor the response to environmental regulations</li> <li>Stabilize facility operations with preventive maintenance for environmental facilities</li> </ul>

**“Stakeholder Interview”** Founded in 2001, the Korea New & Renewable Energy Association(KNREA) is in operation to contribute to the development of the national economy and industries through the supply and expansion of new and renewable energy. The association will also protect the rights and interest of the industry. KNREA is joined by domestic and overseas new and renewable energy related manufacturers, constructors and generation enterprises, and other relevant organizations, which made it imperative for us to play a bridging role between the governments and our members with open and vibrant communications. Among our members, POSCO ENERGY is a company that owns world-class technological competencies in the field of fuel cells and enters a variety of new and renewable energy fields including wind power, photovoltaic generation, bio/waste-to-energy, etc. In consideration of all this, I think that it is somewhat urgent for POSCO ENERGY to build a portfolio for new energy business and secure domestic and overseas markets. To do so, POSCO ENERGY would need to create a public image that allows people to easily regard the company as a provider of eco-friendly energy, employing some initiatives such as “the construction of an eco-friendly energy town” in close cooperation with KNREA and partner companies. If it turns out successfully, I expect that it would result in a new national growth engine as well as a consolidated social consensus for the necessity of new and renewable energy. If so, KNREA will be happy to support and take part in the activities led by POSCO ENERGY.



Korea New & Renewable  
Energy Association  
(KNREA) Manager  
Young-jae Min

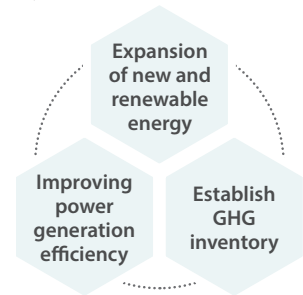
## Response to Climate Change

### Strategies to Respond to Climate Change

#### Implementation Strategies and Countermeasure system

POSCO ENERGY responds to climate change through several measures: continued expansion of new and renewable energy, the efficiency enhancement of power generation facilities, the establishment of greenhouse gas inventory, and reducing greenhouse gas emissions. The company actively participates in various efforts to cut down greenhouse gas, such as the target management system for GHG and Renewable Portfolio Standards (RPS), and has contributed to the revitalization of the carbon market by joining the greenhouse gas trading scheme from 2015.

#### Implementation Strategies and Countermeasure System

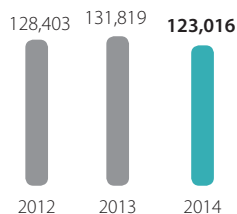


#### Energy Consumption and GHG(Greenhouse Gas) emissions

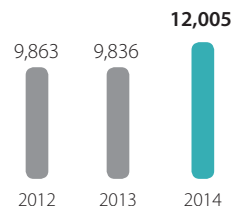
The LNG Combined Cycle Power Plants operated by POSCO ENERGY use LNG, which has the lowest greenhouse gas emission. The company produces electricity by operating high efficiency generation facilities through combined thermal power generation in which waste heat from gas turbines is retrieved for operating steam turbines. The energy consumption of the company in 2014 was 123thousand TJ, and maintains the level of GHG to 0.78tCO<sub>2</sub>/MWh. Greenhouse gas is mostly emitted from fuel combustion; 99.7% of it is from direct emission.

#### Energy Consumption and GHG Emissions

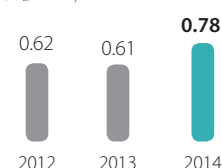
Energy Consumption (TJ)



GHG Emission (thousand tCO<sub>2</sub>)



GHG Emission Intensity (tCO<sub>2</sub>/MWh)



### Activities to Respond to Climate Change

#### Expansion new and renewable energy provision

POSCO ENERGY lowers the generation of greenhouse gas by developing various, new and renewable energies such as solar power, onshore and offshore wind power, fuel cell, etc. and assiduously complies with the Renewable Portfolio Standard(RPS). The company successfully accomplished its target of 3% of obligatory supply percentage of new and renewable energy, contributing to the further expansion of new and renewable energy.

#### Energy Efficiency Improvement with high-efficiency facilities

POSCO ENERGY has replaced Incheon LNG Combined Cycle Power Plant Units 1-2, which have suffered lower energy efficiency due to aging facilities, with the latest and highly efficient Units 7-9. It is expected that the replacement will increase energy efficiency by about 15% compared to the previous units, thereby improving the GHG emission intensity. We also actively pursue energy saving activities with enhancement in facility performance and replacement of lighting fixtures with high efficiency ones, etc.

#### Key achievement in energy saving effort

Classification	Energy Reduction (MWh)	GHG Reduction (tCO <sub>2</sub> )
Improvement in waste heat-retrieval device with cooling air in axis of gas turbines	7,334	3,420
Replacement to high efficiency lighting fixture (LED)	181	84

#### Greenhouse Gas Inventory

POSCO ENERGY establishes a greenhouse gas inventory system and estimate, and it reports the amounts of GHG emission in the headquarters and business premises in accordance with the "Guidelines on GHG/Energy Target Management Operation and Others." In 2014, the company developed an IT system designed for the obligatory supply of new and renewable energy under the Renewable Portfolio Standards (RPS) in connection with ERP. The key information is shared through EIS (Enterprise Information System), which is provided for facilitating effective decision-making by the management.



## Implementation of New and Renewable Energy Business

### New and Renewable Energy Business

POSCO ENERGY is expanding its business fields, previously confined to power generation, to encompass eco-friendly energy business, and it faces new changes and challenges toward the establishment of Total Value Chain for the new energy business. Based on 40 years of experience, the company sets new and renewable energy as its sub-core business and provides momentum to develop with new and renewable energy including off-gas, solar energy, wind power, resource recycling, etc. We are committed to consistently expanding new and renewable energy businesses with aggressive business expansion activities.

### Off-Gas Combined Cycle Power Generation

Off-Gas generated during the operation of blast furnaces in an iron works is utilized for the process of iron works. The left Off-Gas is used for generating electricity, which is called Off-Gas electricity generation, two Off-Gas Combined Cycle Power Plants are located in Gwangyang and Pohang. The first domestic Gwangyang Off-Gas Combined Cycle Power Plant was built in 2010 and produces 284MW of electricity per hour. The Pohang Off-Gas Combined Cycle Power Plant is the first plant of its kind in the world: it generates electricity from mixed fuel of FOG and BFG and has a facility capacity of 290MW. As FOG is around two times higher in calorie, its use leads to sizable growth in the output of Off-Gas Combined Cycle Power Generation.

POSCO ENERGY sets internal management standards on air pollutants that are stricter than the legal management standards and minimizes the generation of pollutants to improve the air environment.

Classification	Gwangyang Units 1-2	Pohang Units 1-2	Indonesia Units 1-2
Capacity	284MW	290MW	200MW
Commencement of commercial operation	#1('10.8) #2('10.12)	#1('13.9) #2('14.3)	#1('14.3) #2('14.4)
Fuel	BFG, COG	FOG, BFG, COG	BFG, LDG, COG



Gwangyang Off-Gas Combined Cycle Power Plant

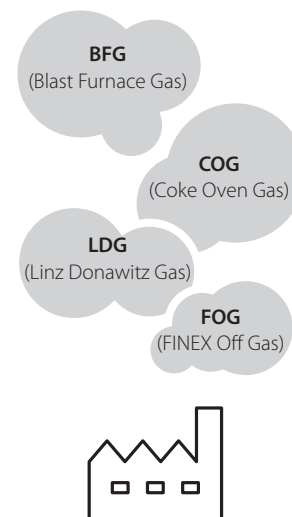


Pohang Off-Gas Combined Cycle Power Plant

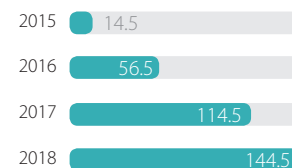
### Solar Power

POSCO ENERGY utilized unused land, which had been originally a deserted salt farm, to build solar (photovoltaic) power plants in the Palgeum-myeon area, located in Shinan-gun, that now produce eco-friendly electricity. As the company developed the deserted salt farm as its operating site for the plant, it was recognized that the company has minimized adverse environmental impacts on the surrounding areas and created eco-friendly synergy with the local communities. POSCO ENERGY has constructed these photovoltaic power plants with a total capacity of 14.5MW three times until 2014. The plants produce 20,000MWh electricity a year, which is enough power for about 5,000 households. The company will look into creating another eco-friendly photovoltaic power plant on unused land to respond to climate change, while securing stable profits.

### Types of off-gases



### Solar Power & Wind power performance and plan (MW)



Shinan Solar Power Plant

## Wind Power

POSCO ENERGY is building the nation's first commercial offshore wind power complex with a capacity of 30MW in the public waters of the water in Jeju island. It is also planning to develop a large-scale Onshore and Offshore Wind Power Complex in Shinan-gun, Jeollanam-do. As for the Wind Power Plant in Jeollanam-do, it is planned to apply the wind power turbines assembled and produced in the region so that it contributes to both the revitalization of the local economy and the growth of wind power business in Korea while effectively responding to the Renewable Portfolio Standards (RPS).



Jeonnam Onshore Wind Power Complex

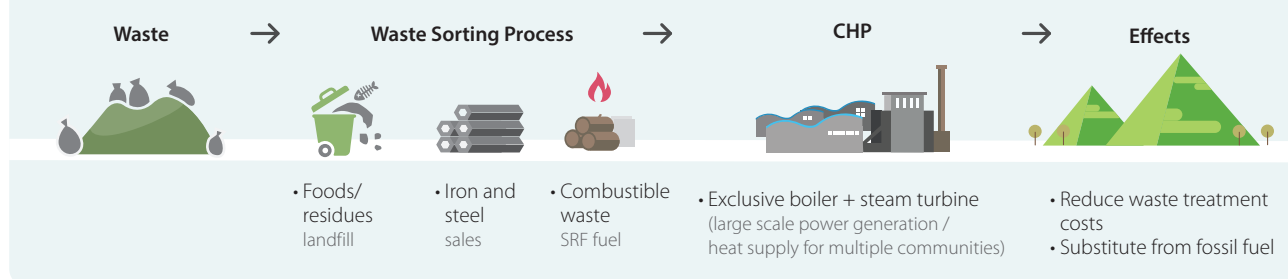
## SRF (Solid Refuse Fuel) Business

POSCO ENERGY operates the first and largest Korean SRF Power Plant located in Busan. As the SRF business produces electricity in an exclusive boiler by burning fuel made out of combustible waste, which has been sorted from noncombustible waste, it makes it possible to consistently treat household waste and produce energy. Heat generated from the energy generation process can be applied for various demands, such as district heating systems and industrial facilities. Environmental pollutants released during the combustion process are under stringent control: generation of pollutants does not exceed the 3-30% level stipulated in the legally required emission standards.



Busan SRF Power Plant

### SRF business process



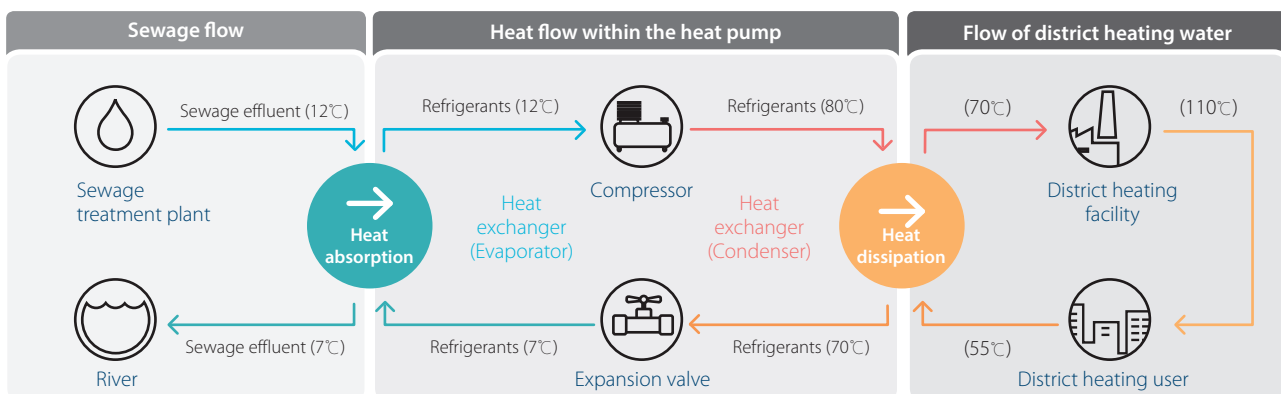
## Sewage Heat Energy Utilization Business

POSCO ENERGY's sewage heat energy business collects and recovers the heat energy generated from sewage water through heat pumps, and then supplies heating energy to nearby areas. Completed on December 2014, the Tanchon Sewage Heat Energy Utilization Facility is the nation's largest sewage recycling heating system. It produces 200,000Gcal of heat energy, which could be used for 20,000 households over a year. The facility will be transferred to Seoul City without consideration.



Tanchon Sewage Heat Energy Utilization Facility

### Process of sewage heat energy utilization

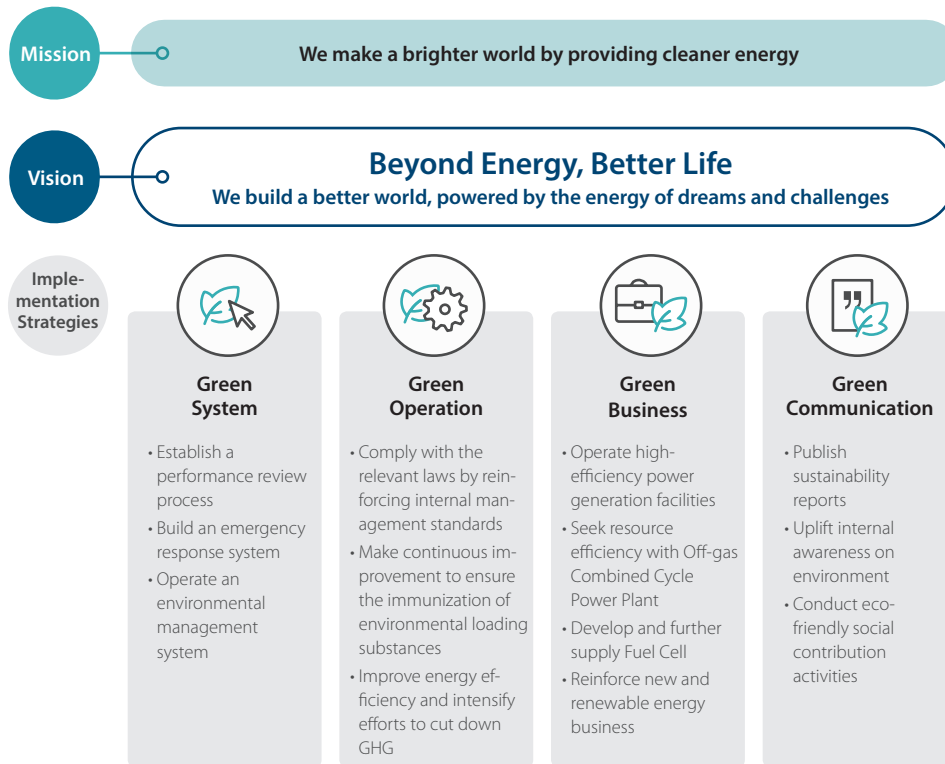


## Minimizing Generation of Pollutants

### Environmental Management System

#### Environmental Management Strategy

To accomplish our vision of "Beyond Energy, Better Life", we established and implemented the four directions of environmental management—Green System, Green Operation, Green Business, and Green Communication—as well as the relevant action strategies



#### POSCO ENERGY's Environmental Management Policy

- Secure global leadership by setting up an environmental management system based on ISO14001 and pursue sustainability management.
- Comply with environmental laws and regulations and continue to improve the environment by taking care of all production processes.
- Strive to reduce environmental pollutants generated with the application of clean production processes and optimum prevention technology.
- Run an audit system to regularly evaluate environmental performance.
- Reduce GHG emission by using clean energy and employing green technologies to lead low carbon green growth.
- Ensure management transparency by disclosing the environmental management performance and strive to fulfill corporate social responsibilities.

### Organizations in charge of Environmental Management

Each business premise has an organization dedicated to environmental issues, and the Environment, Energy & Sustainability Group has been newly set up in headquarter to be responsible over company-wide environmental management. The Environment, Energy & Sustainability Group is responsible for managing environmental issues for each business premise, pushing initiatives forward to fortify environmental management.

### Environmental Management System Certification

POSCO ENERGY adopted and applied ISO14001 to raise company-wide awareness of environmental improvement and optimize the operation of environmental facilities. As the company also acquired ISO14001 certification for the Pohang Off-gas Combined Cycle Power Plant in 2014, it achieved certification for all of its business premises and sites. POSCO ENERGY is identifying areas requiring improvement from an environmental perspective with a quarterly self-assessment and post-assessment conducted by external experts and advancing the environmental management system.

### Support Environmental Management in Partner Companies

POSCO ENERGY assists environmental management in partner companies and suppliers in the field of environment. It identifies the environmental risks in partner companies with visits and check-ups, discusses measures to tackle risks, and exchanges environmental information with them.



ISO14001 Certification Letter



## Minimization of Environmental Impacts

### Air

POSCO ENERGY has established a Tele-Monitoring system (TMS) for managing the level of nitrogen oxide (NOx) released from power plants on a real-time basis. The Incheon LNG Combined Cycle Power Plant has signed the voluntary agreement for emission-cap regulation for air pollutants in accordance with the SPECIAL ACT ON THE IMPROVEMENT OF AIR QUALITY IN SEOUL METROPOLITAN AREA and performed the service for improving air quality with a municipality, Incheon metropolitan city. Such efforts clearly demonstrate the company's strong commitment to minimizing adverse environmental impacts

Classification	Unit	2012	2013	2014
Total NOx emission	ton	2,126	2,045	1,957
NOx emission intensity	kg/MWh	0.13	0.13	0.13

### Water

POSCO ENERGY uses water for producing steam and operating facilities and continues its efforts to reduce the volume of water used by means of reuse, recycling, and achieving improvements in facilities.

Classification	Unit	2012	2013	2014
Total	ton	2,080,858	2,079,558	2,906,563
Incheon Combined Cycle Power Plant	ton	1,316,858	1,357,955	1,179,050
Gwangyang Off-Gas Combined Cycle Power Plant	ton	735,398	689,913	753,686
Pohang Off-Gas Combined Cycle Power Plant	ton	-	-	936,178
Pohang Fuel Cell Plant	ton	28,602	31,690	37,649

### Water Quality

POSCO ENERGY sets its own standards for water pollutants, which are stricter than the legally permissible discharge limit, and monitors real-time abnormalities of wastewater discharging and prevention facilities by using the TMS. The company also has a management system to rapidly identify and locate any problems in water quality and take the appropriate measures by means of regular self assessments on the water pollution index, such as COD, SS, and pH, pursuant to the relevant regulations. As for the Pohang and Gwangyang Off-Gas Combined Cycle Power Plants, discharged water is treated after being transferred to the wastewater treatment area of a local still mill to be collectively treated with still mill wastewater. The fuel cell power plant does not produce wastewater.

### Waste

The management and treatment of any waste generated during the operation of power generation facilities are conducted under legally-acceptable processes and classified into different types. Waste is then either recycled or treated by an outsourced company. Although the company tries to reduce waste generation and increase the amount of waste to be recycled, the total amount of waste generation increased in 2014 due to the unexpected generation of temporary waste. POSCO ENERGY plans to reduce waste generation and to maintain its efforts to increase the amount of recycled waste.

Classification	Unit	2012	2013	2014
Amount of waste	ton	1,126.5	1,202.1	1,597.1
Recycling rate	%	37.9	44.8	36.4

# 3

ASPECT

## Happy and Safe Workplace



### Understanding of Aspect

Seeking and fostering talented individuals is one of the imperative prerequisites for any company to secure a competitive edge to transcend national boundaries and explore the global market. POSCO ENERGY has established a model to find global talent and advanced the required training policy to cultivate competent and talented employees, as well as provide a pleasant place to work. As the recent occurrence of a number of large-scale safety accidents have brought attention to the issue of safety in Korea, this resulted in stricter safety related regulations and the rising awareness on safety. POSCO ENERGY places top priority on the safety and health of employees and strives to create happy and safe workplace.

Total Training Costs

**940**  
million KRW

Absenteeism

**0.30%**



### Introduction to Core Issues

POSCO ENERGY reconfirms the fields of interest for stakeholders and determines the direction to lead its strategic efforts and future tasks to pursue. Among the core issues selected out of a materiality evaluation process, we classified "Create Great Workplace", "Recruit Quality Talent and Strengthen the Competitiveness of Executives and Employees", and "Safety and Health Management" into the core aspect of "Happy and Safe Workplace" in terms of securing talented individuals, strengthening competencies, and achieving safety management in business premises.

**Core Issue. 7**  
Create Great  
Workplace

**Core Issue. 8**  
Recruit Quality  
Talent and Strengthen  
the Competitiveness

**Core Issue. 9**  
Safety and Health  
Management



**Aspect**  
**Happy and Safe**  
**Workplace**



### Key Achievements and Goals

POSCO ENERGY is continuously developing a manpower cultivation program to strengthen the work performance of employees in their respective duties and positions. The company plans to foster competent global experts by providing them with different levels of work-related education and training in conjunction with domestic and overseas agencies specialized in employee training. The company will also maintain improvement activities in terms of employee Safety and Health management to minimize unfortunate accidents and go on with efforts to create a corporate culture to make employees happy.

Classification	Achievement in 2014	Plans for 2015
Create Great Workplace	<ul style="list-style-type: none"> <li>Created happy workplace through trust-based communication and field-oriented management</li> <li>Promote the Thanks-Sharing Campaign and Thanks-Sharing broadcasting</li> </ul>	<ul style="list-style-type: none"> <li>Implement organizational culture customized for employees</li> <li>Improve quality of life of employees with continued operation of family-friendly system</li> </ul>
Recruit Quality Talent and Strengthen the Competitiveness of Executives and Employees	<ul style="list-style-type: none"> <li>Strengthened training system to improve job competency and work engagement</li> <li>Advanced the working methods based on PI3.0 &amp; SWP</li> </ul>	<ul style="list-style-type: none"> <li>Implement a roadmap to reinforce job competency</li> <li>Timely recruitment of experts in the relevant fields with business expansion</li> </ul>
Safety and Health Management	<ul style="list-style-type: none"> <li>Obtained level P for the Process Safety Management</li> <li>Received Safety Award for POSCO Family</li> <li>Continued facility enhancement and improved safety work process</li> </ul>	<ul style="list-style-type: none"> <li>Continue to operate no-accident plants with reinforced safety activities</li> <li>Get accustomed to Felt Leadership that calls for action</li> <li>Promote strengthening activities for safety competency of employees</li> </ul>

## Create Great Workplace

### Promote Communications among Executives and Employees

POSCO ENERGY sets happy management as one of its important values, seeing it as a means to grow and develop with all stakeholders without compromising the interest of the overall company. The company internalizes "happy management" as its corporate culture through various communication channels for executives and employees so as to allow both the company and all its employees to share a single vision in their development.

#### CEO Talk Concert

POSCO ENERGY executes a CEO talk concert for each business premise in order to share the company's vision and CEO's management philosophy and to provide an opportunity to freely communicate with employees. The Talk Concert consists of two parts: the lecture held by the CEO to directly explain POSCO ENERGY's future vision and the CEO's management philosophy and Q&A session organized based on an instant survey that allows employees to ask what's on their minds. The CEO Talk Concert is held in a way to encourage employees to form a sense of belonging as part of POSCO ENERGY.



CEO Talk Concert

#### Mentoring System for Short Service Employees

POSCO ENERGY conducts a mentoring system in which a senior employee with rich experience and professional knowledge will be exclusively assigned to a short service employee to provide one-on-one help and guidance to develop the mentee's competencies. The mentoring system in POSCO ENERGY differs from one-time OJT normally given to new employees over a short period of time when they newly enter a company: it allows the senior employee to continue to support the short service employee until they become managers and is characterized by an opportunity for mentees to select who to teach them. The system is advantageous in that it deals with not just work-related matters, but also provides genuine coaching for employees to discuss their concerns and career development.



Mentoring for short service employees

#### Happiness Index

POSCO ENERGY believes that the happiness and job satisfaction of employees are the pillars of the company's competitiveness and the foundation of a unique corporate culture. Therefore, the company is committed to make a "happy and workable workplace". All POSCO ENERGY people work hand in hand to create a workable workplace by practicing: enhancement in trust for the organization and the management, inspiration and a sense of pride in what they do for the company, and mutual respect and understanding. The company annually conducts surveys and interviews for all employees and measures their happiness index based on various criteria including where they work, positions, years of service, gender, etc. The measurement results are taken seriously and reflected to future system improvement and direction of happy management.

#### Happiness Index (point)

2012	2013	2014
75.1	81.4	77.0

#### Family Friendly Management

POSCO ENERGY operates a flexible working time scheme that allows employees to informally vary the time they go to work between 7 a.m. and 11 a.m. so as to support employees' self-development, childcare, and education. The company also designated every 2nd and 4th Wednesday as "Family Day", the day all employees leave the office one hour earlier than usual so that they can spend quality time with their families.

**Opening of Daycare Center and Childcare Support** | POSCO ENERGY actively supports employees' childcare by operating a daycare center where employees can bring their children so they can enjoy peace of mind while they are working. The company also permits female employees to take 90 days cumulative maternity leave and up to one year of child care leave. Male employees can also benefit from paid paternity leave.

#### Employee benefits

**Loans**  
(Mortgage loan, Livelihood settlement loan)



**Education**  
(School tuition fees, Over-the-phone language study, Language Club)



**Selective benefits**  
(Welfare card system)



**Medical support**  
(Health check-up, medical expense support)



**Leisure**  
(Condominium, summer holiday accommodation support)



**Other programs**  
(Expenditures for congratulations and condolences, Company housing, club activities, etc.)



## Establishing Good Labor-Management Relations

POSCO ENERGY seeks to maintain continuous stability of labor-management relations, making efforts to realize internal collective agreement and ethical standards concerning human rights and labor issues. The company also prohibits discrimination, forced labor, and child labor in accordance with the UN Global Compact and its internal rules. Furthermore, the company runs a grievance resolution committee to listen to the various opinions of employees and promptly address their concerns and issues with prompt feedback or resolution.

### Labor-Management Council (Grievance Resolution Committee) and Grievance Consultation Office

POSCO ENERGY forms and operates a Labor-Management Council and a Grievance Resolution Committee in each business premise to discuss all issues requiring labor-management cooperation including employee grievances, salary system enhancement, improvement of working environments, etc. The Grievance Resolution Committee offers a grievance resolution procedure for each business premise, and has systemized the direct interview with the head of the relevant division for quick-resolution. Any grievance reports, complaints, and suggestion are strictly confidential, and matters that cannot be resolved immediately will be handled by the quarterly Labor-Management Council to be resolved.

### Dialogue Channel between Labor and Management

To build a cooperative relationship and form close personal ties with the labor union, POSCO ENERGY regularly conducts collective bargaining with the labor union on wages and collective agreements. In case of important company decisions or issues that may directly affect the working conditions of employees, the company frequently consults with the labor union to reflect their opinions in decision-making. In addition to the labor-management council, the company holds monthly meetings to review grievances and concerns to ensure close dialogue between labor and management.

## Thanks-Sharing Campaign

POSCO ENERGY's Thanks-Sharing campaign, "Happy Energy, Thanks-Sharing Campaign" is designed to "share the warmth, be thankful, and love together". The company takes the lead in establishing a genuinely happy organizational culture that spreads appreciative and positive mindsets among all employees.



In-house Thanks-Sharing Broadcasting

### In-house Thanks-Sharing Broadcasting

Since May 2013, the Thanks-Sharing broadcasting has been on air in every business premise. Employees share their own gratitude story every day at the end of office hours and around 500 employees have participated in the broadcasting.

### Thanks-Sharing Leader and Thanks-Sharing Event

"Thanks-Sharing Leader" within departments designate quarterly action for sharing gratitude among co-workers and encourage employees to put into practice. To promote autonomous employees' participation, the company holds various events to practice Thanks-Sharing in an easy and fun way during special days such as Chinese New Year, Month of Family, Chuseok(Korean Thanksgiving Day), and the year-end.

### Publishing Thanks Newsletter

In addition to active Thanks-Sharing activities, the monthly Thanks Newsletter is also published to help create a happy power plant in POSCO ENERGY, based on mutual understanding and trust building among executives and employees. The Thanks Newsletter offers updated information on regarding Thanks-Sharing activities such as Leaders' encouragement activities, family photo-taking events, Thanks-Sharing Leaders' group meeting, etc.



Thanks Newsletter

## Recruit Quality Talent and Strengthen the Competitiveness

### Recruit Quality Talent and Strengthen the Competitiveness of Executives and Employees

As POSCO ENERGY recognizes that the source of global competitiveness lies in its employees, it hires and trains talented and motivated individuals, supporting them to become competent employees.

#### Recruitment of Talented Individuals and Respect for Diversity

Founded on its four core values of "Passion, Communication, Co-Success, and Green Innovation", POSCO ENERGY pursues its own talent model as the world best energy leader who places importance on the values of challenge and trust. The company implements a non-discriminatory open recruitment by which equal opportunity is ensured and selection is made based on individuals' competencies. It also encourages the recruitment of local people within the area where the company operates its business. POSCO ENERGY also pushes forward a policy to increase overseas recruitment to expand global leader training and localization.



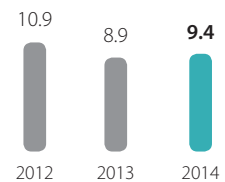
**The World Best Energy Leader**  
who place importance on the values of challenge and trust

**World's Best Experts**  
with global competency  
and leadership

**Trusted Talent**  
who recognize their  
differences and  
communicate with others

**Ethical Talent**  
who prepare for the future with  
creativity and passion and take  
the lead in green innovation

**Total Training expenses**  
(100 million KRW)



#### Talent Cultivation System

POSCO ENERGY puts top priority on fostering competent and talented individuals. Based on the company's personnel principles and corporate culture, all employees undergo basic training programs customized to different positions that teach the common values of the POSCO Group, leadership training on trust and communication, job competency programs to improve problem solving skills, and various language learning and overseas programs.

	Leadership Training	Common Competency Training	Job Expertise Training	Basic Training by Different Positions	Global & Language Education
<b>In-house Programs</b>	Leadership education for position holders (1~3 days) Education from Innovation Support Center (Shiftwork regular course)	Job competency program for fresh graduates (3 years) Education from Innovation Support Center (common technical education)	Engineer's dissertation presentation Education from Innovation Support Center (installment and repair)	Jump-up program for employees who have worked for the company for over a year (1 night & 2 days)	Language Learning Club (6 months, mandatory language test) Overseas training (4 nights & 5 days)
<b>POSCO Family Programs</b>	Monthly Saturday learning (4hr a month) Training for new position holders (3 days) (executives, team/group leaders)	Courses on business strategy for executives (2 days) Education for new employees (2 weeks) Executives training (18 weeks) Education for experienced employees (1 week)	Cyber University (6 months) Off-duty Global leader training (10 months)	Family MT (1 night & 2 days)	Sojourning employee training course (5 days) Language course outside of work (3 months)
<b>External Programs</b>	Chief Officer Course (6 Months) IMI Breakfast Management (Monthly)	Introduction to electricity trading (3 days)	MBA (2~2.5 years) Training from power generation education center (1~2 weeks)	Autonomous selection of courses by division utilizing their budgets	Over-the-phone language course (6 months, mandatory language test) Intensive training for sojourning employees before the dispatch (1~3 months)
<b>e-learning Programs</b>	Selected online courses in e-campus			Mandatory online education in e-campus	Selective online courses in e-campus

☒ Required ☐ Selected ☐ Selective



## Expert Development by Increasing Competencies

### Reinforcing Global Competency

**Study Abroad Support Program** | The study abroad support program is operated to foster and nurture enterprising and creative leaders who will lead the future growth of the company. Applicants of the program will be screened and selected through an in-house invitation. As a work-and-study type program, it supports employees who apply for Degree Programs of renowned graduate schools in Korea so that selected employees can instantly apply what they learn in school to their work, thereby contributing to the enhancement of job performance. Moreover, the program provided the selected employees with full tuition fees during their study periods to motivate employees to actively be engaged in self-development.

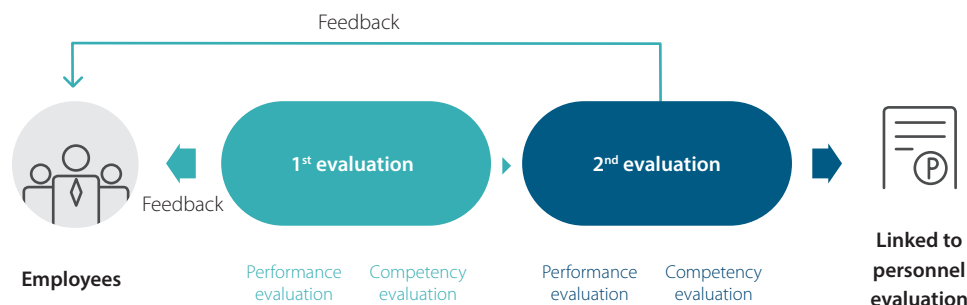
**Foreign Culture Experience Program** | POSCO ENERGY annually selects around 40 excellent employees twice a year. The program allows the selected employees to experience foreign cultures, as well as observe the industries and distinguished companies in countries where the company plans to enter their market. For the past 10 years, employees have visited various countries including Vietnam, Japan, Hong Kong, China, etc., and consequently developed the ability to actively respond to changes in the global business environment. In the future, the program will expand to more countries, including countries where POSCO ENERGY's overseas affiliates are founded, and also develop various experience programs.

### Strengthening Job Competency

**Engineer Dissertation Presentation** | POSCO ENERGY holds engineer dissertation presentations every year to cultivate employees' expertise, problem-solving skills, and actual career development while strengthening R&D capabilities to underpin the company's future growth. Engineers select topics of importance that require more research and improvement within their fields, and then write their dissertations based on their research. It has become a platform for field engineers from all business premises to gather together and share their knowledge and information.

### Fair Performance Evaluation and Compensation

To facilitate all employees to exert their full potential, POSCO ENERGY has established a fair and rational performance evaluation system. The company manages the performance of employees, without discrimination of gender, and evaluates them with a range of criteria through independent and objective evaluation process. Based on the evaluation results, the company impartially compensates and rewards the employees in accordance with its principle of meritocracy.



### POSCO ENERGY Award for Model Employee

To promote a culture of praise and recognition, POSCO ENERGY selects excellent employees, who set laudable example in terms of the company's vision and core values and contributed to the development of the company, to receive the POSCO ENERGY Award for Model Employee.



Foreign Culture Experience Program



Engineer Dissertation Presentation

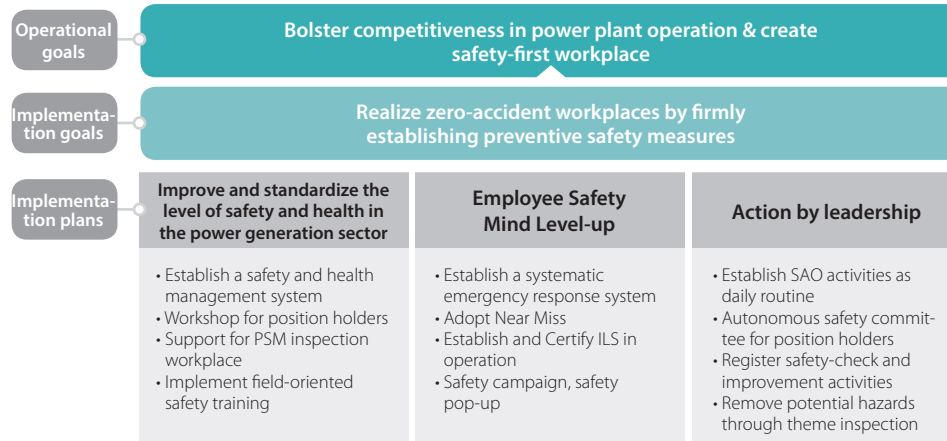


POSCO ENERGY Award for Model Employee

## Safety and Health Management

### Safety and Health System

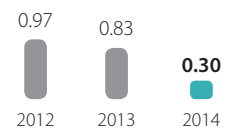
It is POSCO ENERGY's top priority to protect the safety and health of the employees, which is why the company established a safety and health system to prevent industrial incidents from happening and create a pleasant workplace. The company also acquired KOSHA18001 for the operation of its business premises. We will continue developing our safety and health system and enact preventive safety measures to realize zero-accident workplaces.



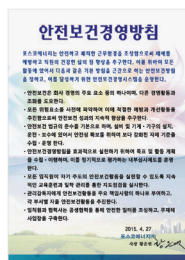
### Safety Management Performance

POSCO ENERGY has been solidifying its status as a leader in occupational safety and health that realizes Zero disaster and Zero accident plants of happiness, supported by the organized operation of a safety and health system. The company has identified problems in 12 major tasks from the process safety management and enacted meticulous efforts to improve and solve the problems. As a result, the company received the best level, P from Process Safety Management (PSM) last year, as well as the "2014 POSCO Family Safety Award", which is the most recognized and preminent award in the area of safety within the POSCO Family. We will continue to reinforce safety practices by investing efforts in areas such as: advancing the safety awareness for employees, ensuring greater safety in processes and facilities, and optimizing safety systems.

#### Absenteeism (%)



#### No. of accidents (cases)



Safety & Health Management Policy



P Grade Certification from Process Safety Management



KOSHA18001 certification



Received Safety Award for POSCO Family



Safety and Health Workshop

### Operation of Safety and Health Consultation Body

To raise the level of awareness on safety and health in workplaces, we will cultivate better communication among workplaces. POSCO ENERGY holds workshops for safety managers and position holders to build a consensus and strengthen safety practices. The company also runs a quarterly occupational safety and health committee to consult on issues relevant to safety and health and discuss implementation situations. The autonomous safety committee is also held each month and participated by the heads of generation plants and position holders to strengthen safety oriented mindset and put better safety and health measures into practice.

## Safety Improvement Practices

### Improvement in Near Miss

POSCO ENERGY conducts Near Miss practice that collects dangerous cases that might lead to accidents and takes appropriate actions to prevent them from developing into real accidents. All employees are committed to establishing a safety culture to identify potential accident risks and share information to forestall disasters. The company encourages practices to preclude any possible accidents from occurring by operating an in-house bulletin board enabling employees to share improvement practices in real-time, as well as selecting and rewarding excellent employees who have detected and reported Near Miss cases every month.

### Risk Top 10

To prevent possible disasters by discovering and eliminating risk factors in on-site facilities, the company adopts and implements the Risk Top 10 system that sets up ten improvement challenges and executes activities to solve these problems.

Good examples will be shared in the autonomous safety committee held every month and throughout the entire company.



### Safety and Health Training and Emergency Response Drill

In an effort to raise the level of safety, POSCO ENERGY offers systematic customized training appropriate to trainees so as to prevent any safety accidents. The safety education programs by sectors implemented by the company include statutory education, in-house education, and fire drills, as well as workshops and regular/special safety training. In addition, the company reinforces employee's safety competencies through regular risk evaluations of processes and facilities and by emergency response plan drills.



Emergency response drill  
against toxic substance release

### Joint Special Safety Inspection by Labor and Management

Hosted by the head of a division, the special safety inspection jointly conducted by labor and management is accompanied by an honorary occupational safety supervisor and all position holders to check the safety management practices in the field and preclude any possible accidents from occurring by eliminating any potential risk factors discovered.



Joint special safety inspection  
by labor and management

### Coexistence & Cooperation Programs

POSCO ENERGY provides employees from partner companies with coexistence & cooperation programs. The company also conducts a joint safety inspection with the partner companies to prevent safety accidents at work by complying with the safety regulations and inspecting the management of risk-prone machinery and equipment, etc.

### Safety Campaign

To ensure firm the establishment of safety culture, POSCO ENERGY holds regular safety training and conducts a safety campaign in which all employees to take part. To raise safety awareness, the company has distributed daily safety guideline stickers and carried out safety training for emergency situations. The company invited safety experts from Gangnam Fire Station to conduct a program to promote life safety practices, showing how to respond to fire, how to use a fire extinguisher, artificial respiration, CPR, etc.



Safety training to respond to  
emergency situation

# 4

ASPECT

## Customer Satisfaction Service



### Understanding of Aspect

It has become imperative for fuel cell business to provide services such as repair and maintenance due to the increasing social demand resulting from constantly rising electricity consumption and the government's policy orientations on new and renewable energy. POSCO ENERGY operates customer service centers by district to ensure stable operation and to improve the operating rate of fuel cells. The company has also established a service web portal system for customers and the supply chain to ensure immediate material supply of fuel cells.

Operating rate

96%



### Introduction to Core Issue

POSCO ENERGY reconfirms the fields of interest for stakeholders and determines the direction to lead its strategic efforts and future tasks to pursue. Among the core issues selected out of a materiality evaluation process, we identified "Customer Satisfaction Management" under the core aspect of "Customer satisfaction service" in terms of strengthening response at customer contact points and customer satisfaction improvement.

**Core Issue. 10**  
Customer  
Satisfaction  
Management



**Aspect**  
Customer  
Satisfaction Service



### Key Achievements and Goals

POSCO ENERGY continues to improve the customer VOC reception and handling process and is committed to providing customers with quality services. The company runs technical support centers to carry out management and supervision on fuel cells in operation in Korea 24 hours a day, 7 days a week. POSCO ENERGY is expanding these centers to ensure appropriate responses to emergency situations and that proper follow-up measures are taken at the customer contact points. The company also laid a foundation for constructing service systems in different regions in order to exert concerted efforts to provide stable technical support center operation and improved customer satisfaction.

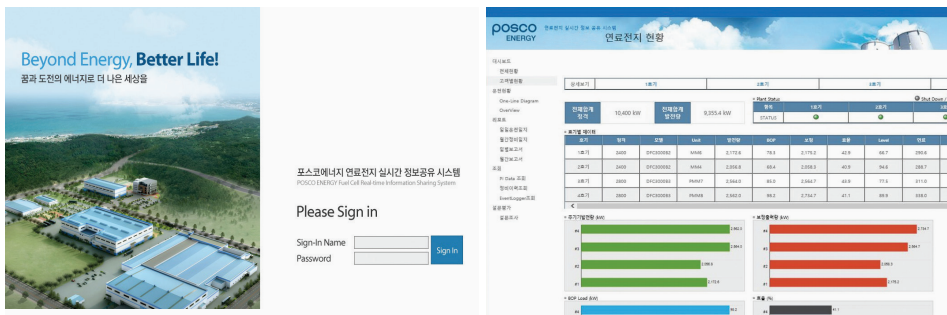
Classification	Achievement in 2014	Plans for 2015
Customer Satisfaction Management	<ul style="list-style-type: none"> <li>Expanded service technology competency and reinforced operation systems</li> <li>Established real-time data sharing service system for fuel cell</li> <li>Strengthened customer satisfaction activates and stabilized operational quality</li> </ul>	<ul style="list-style-type: none"> <li>Stabilize operation quality by strengthened service performance and improving usage rate</li> <li>Achieve Zero-facility breakdown rate</li> <li>Generate new source of profits by improving LTSA product model</li> </ul>

## Customer Satisfaction Management

### Strengthening Response at Customer Contact Points

#### Establishment of Real-time Information Sharing Service for Fuel Cells

POSCO ENERGY has established the Fuel cell Real-time Information Sharing Service System (RIS) to systemize customers' request reception and handling, as well as share operation dates with customers on a real-time basis. Through the Fuel cell Real-time Information Sharing Service, the company is able to check real-time operation in each facility, access operation data records, and share the reception and handling of customer requests, etc. so that it can effectively respond to customers' requests and improve customer service satisfaction.



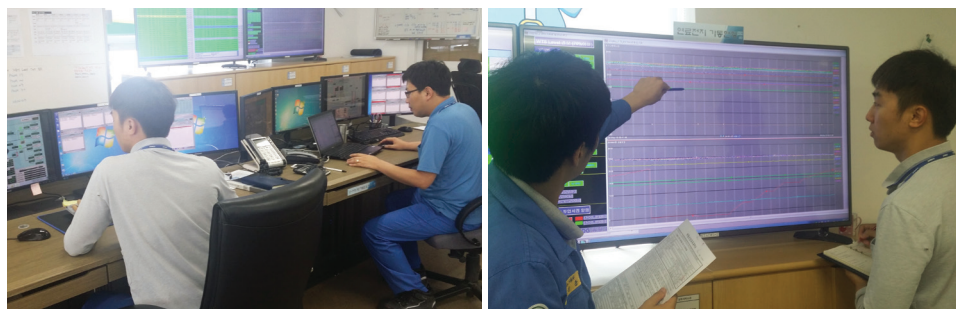
Fuel cell Real-time Information Sharing Service System (RIS)

#### Expected effects with RIS introduction



#### Real-time Technical Support for Customers

POSCO ENERGY has founded the 24/7 Korea Technical Assistance Center (KTAC) within the Pohang fuel cell manufacturing plant and trained technical experts through collaboration with the manufacturer and technology transfer programs, etc. These technical experts are in charge of assisting with various technical skills including 24/7 remote-operation services, technical support for breakdown and maintenance, integrated history management, sustaining optimal operational status, etc., thus maximizing customer satisfaction.



Operation of 24hr technical support center

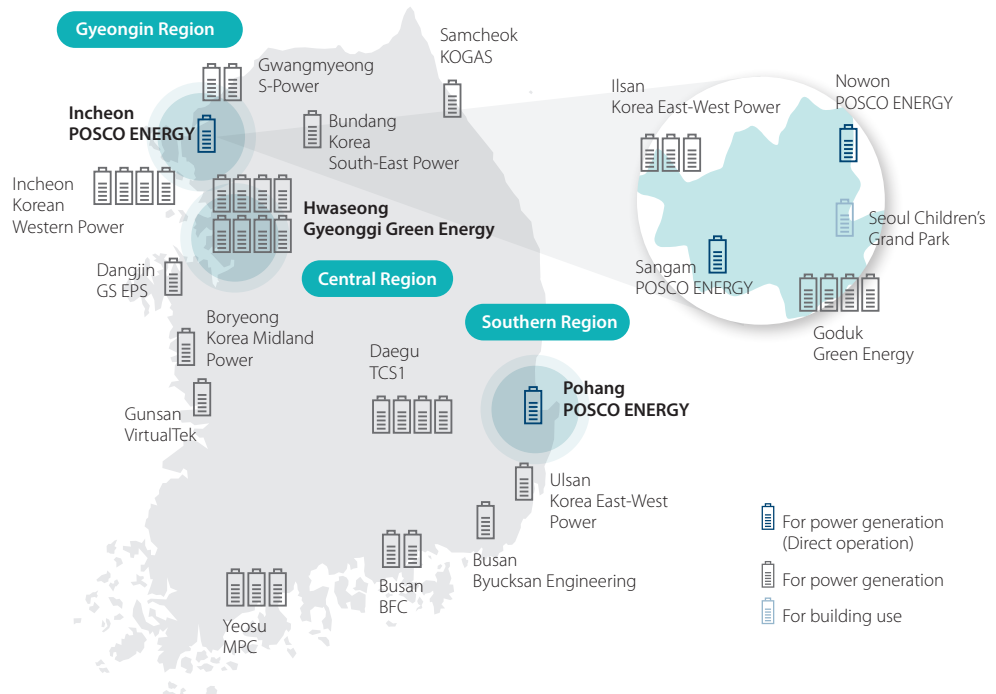


## Strengthening the Role of Service Organization

### Customer Service Centers for Fuel Cell

POSCO ENERGY is currently running customer service centers in three districts, which are in the Gyeonggi, Central, and the Southern regions. The operation of service centers offers a foothold for the service system in different regions and enables us to focus on ensuring stable operation and improved operating rates of fuel cell plants in each region. We will continue our commitment to earning the trust of our existing and new customers.

### Customer Service Centers for Fuel Cell



## Expansion of Technology Education Customized to Product Types

As with the diversification of fuel cell products, customers consequently require more varied training. In line with this demand, POSCO ENERGY has expanded the customized technology training for its customers. These training programs enable us to provide customers with much-needed technical knowledge such as fuel cell system expertise, operating manual and plant control training, and on-site training, and to share information on industry trends and future business visions. We have offered a total of 20 training sessions to our customers in 2014 and plan to invigorate education quality by developing more training programs so as to meet our customers' expectations.



Technical training for customers

# 5

ASPECT

## Fair Competition and Cooperation



### Understanding of Aspect

As the autonomous compliance to fair trade between corporations has been legally institutionalized with a growing importance of establishing trusted trade relations, shared growth and co-prosperous management is not just important in the business sector, but also in the government sector, resulting in support through government policies. POSCO ENERGY is also committed to making fair evaluations and assessments in selecting its partner companies and suppliers, as well as establishing fair trade relations by concluding transparent agreements with partners.

Benefit Sharing

**700**  
million  
KRW



### Introduction to Core Issue

POSCO ENERGY reconfirms the fields of interest for stakeholders and determines the direction to lead its strategic efforts and future tasks to pursue. Among the core issues selected out of a materiality evaluation process, we identified "Reinforce Shared Growth Activities" under the core aspect of "Fair Competition and Cooperation" in terms of establishing reliable trade relations throughout the supply network.

**Core Issue. 11**  
Reinforce Shared  
Growth Activities



**Aspect**  
Fair Competition  
and Cooperation



### Key Achievements and Goals

In an effort to protect partner companies from unfair behaviors and practices, POSCO ENERGY has set up a fair trade guideline and introduced a standard subcontractor agreement. The company makes sure that the evaluation/assessment process is conducted in a fair and just manner when it selects and assesses partner companies/suppliers. The company also sets up and implements a monitoring system to manage the actual needs of partner companies to ensure that they will receive supports they need it. The company is broadening the range of support, extending these benefits to secondary partner companies.

Classification	Achievement in 2014	Plans for 2015
Reinforce Shared Growth Activities	<ul style="list-style-type: none"> <li>Implemented shared growth activities based on partner companies' needs</li> <li>Strengthened the support programs for secondary partner companies</li> <li>Eased payment conditions through broadened criteria for eligibility as SMEs</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen suppliers' competitiveness with shared growth activities</li> <li>Operate performance sharing process based on co-prosperity and cooperation</li> <li>Improve communication with partner companies by diversifying channels</li> </ul>

**"Stakeholder Interview"** HK TURBINE is an SME that attracted attention for being the first in the world to apply domestic technologies to invent steam turbines specialized in industrial waste heat. Since we first signed the joint development agreement with POSCO ENERGY in 2012, we have maintained a sustained and wide-reaching cooperative relationship. For instance, early this year, we concluded another agreement to provide two reaction steam turbine units to the company, which is worth around 2.5 billion KRW. Since we were able to receive extensive support and assistance from the company, we could accomplish successful technical and business performances. What struck me the most about POSCO ENERGY was the company's investment in possibility, the management's commitment to shared growth, and the horizontal and vibrant communication. I expect that POSCO ENERGY will be engaged in expanding shared growth with SMEs, just as in the cooperative relationship between POSCO ENERGY and HK TURBINE, based on open communication and partnership, and I hope the company will be a top-notch company that continues to demonstrate leadership based on co-prosperity.



HK TURBINE  
CEO Jeong-hoon Kim

## Reinforce Shared Growth Activities

### Shared Growth with Partner Companies based on Fair Trade

Based on horizontal trade relationships with partner companies, POSCO ENERGY is engaged in fair and just agreements and partner company management. The company also operates a range of support programs in various fields including finance, technology, education, etc. to effectively promote shared growth by building partner companies' competencies.

#### Establishment of horizontal trade relations with partner companies

POSCO ENERGY adopts and runs an autonomous fair trade program and implements a transparent procedure in dealing with partner companies, from selection and agreement to evaluations.

#### Implementation of voluntary management through fair trade and shared growth agreement |

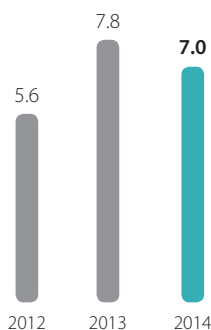
POSCO ENERGY has voluntarily signed the "Fair Trade and Shared Growth Agreement between Large cooperation and SMEs" with around 150 primary partner companies and recommended them to seal the same agreement with the secondary partner firms so as to promote a fair trade culture. In particular, the company has set up and complied with the four guidelines of fair trade while introducing the standard subcontractor agreement to protect suppliers from unfair business practices.

**Transparent agreement |** The company is committed to ensure transparency in its agreement procedure by implementing the e-Procurement system. It also enacts efforts to ensure that every agreement is sealed in a transparent and fair manner by holding the Subcontracting Evaluation Committee at least once a month. It also uses an advanced self-review process for any subcontractor agreement exceeding a certain value to deliberate whether the subcontractor-level legal requirements are strictly complied in areas such as oral orders, unfair cutback, etc.

**Fair selection and evaluation of partner companies |** POSCO ENERGY abides by the selection and evaluation standards in accordance with its work standards and is committed to secure the fairness in evaluation and assessments through POSCO Family SRM (Supplier Relationship Management). The company expands its SRM to partner companies as it considers the implementation of social responsibilities on environment and safety, etc. during the registration and assessment of partner companies, thereby expanding its values to partner companies' SRM.

#### Benefit Sharing

(100 million KRW)



#### Various Support Programs for Partner Companies

POSCO ENERGY runs various support programs for its SME partners such as benefit sharing programs, and purchases their products with 100% cash. The company also operates shared growth programs in various areas including finance, technology, and manpower.

**Benefit Sharing System |** In cooperation with SMEs, POSCO ENERGY operates the Benefit Sharing system, which allows the company to cooperate with SMEs to conduct joint projects such as new technology development and localization. POSCO ENERGY then shares the financial performance obtained from these projects. In conjunction with the Cooperation between Large & SMEs Promotion Foundation under the Ministry of Trade, Industry and Energy, the company donates the investment funds for shared growth, which will be paid in the form of compensation for the test products or cash rewards. The size of the donation grows every year and is expected to grow even more.

## Win-Win Support Team

POSCO ENERGY makes the most out of the abundant experiences and knowhow of its executives by organizing a Win-Win Growth Support Team to help partner companies complete the projects in which they are engaged. Under the leadership of the responsible executive, the company offers substantial and practical support for partner companies to accomplish office productivity innovation and field improvement. The support area has been extended to ethical training and appreciation sharing, among others. In addition, the company intends to achieve shared growth in a wider sense by extending the targeted beneficiaries to secondary suppliers and lower.

## 100% Cash Payment on Purchase

To facilitate smooth financial flows for SMEs, POSCO ENERGY pays for the purchases from SMEs in cash, and these payments are made twice a week. The payment is completed no later than five days after the products are received.

## Financial Support

POSCO ENERGY helps partner companies to borrow loans at a lower interest rate than the market rate by utilizing the POSCO Family Shared Growth Fund. The company also donates 100 million KRW every year to the Industrial Innovation 3.0 Campaign led by the Ministry of Trade, Industry, and Energy, and it supports secondary partner companies or lower to raise their productivity with business consultations and equipment purchase.

## Support for Technology and Market Search

To protect the technologies of partner companies, POSCO ENERGY encourages them to file a joint-patent application with POSCO ENERGY, while supporting 100% of the fees required for new or renewed access to the technology escrow system. The company assisted the public-private investment in steam turbines with a capacity of 500KW and pilot research, and it helps partner companies find new markets. The company sealed an MOU with Seoul city to cultivate SMEs with green technologies.

## Education and Human Resources Support

POSCO ENERGY provides its SME partners with various free collective education and e-learning programs by using POSCO Group's National Human Resource Development Consortium. In addition, the company is committed to upgrading partner companies' competencies through various programs such as technical training for partner companies stationed in Incheon power plants and FTA Country of Origin Management Training for SME exporters. POSCO ENERGY also helps partner companies to secure a platform to hire talented individuals with full financial support offered to participate in job fairs.



CEO's visit to a secondary partner company



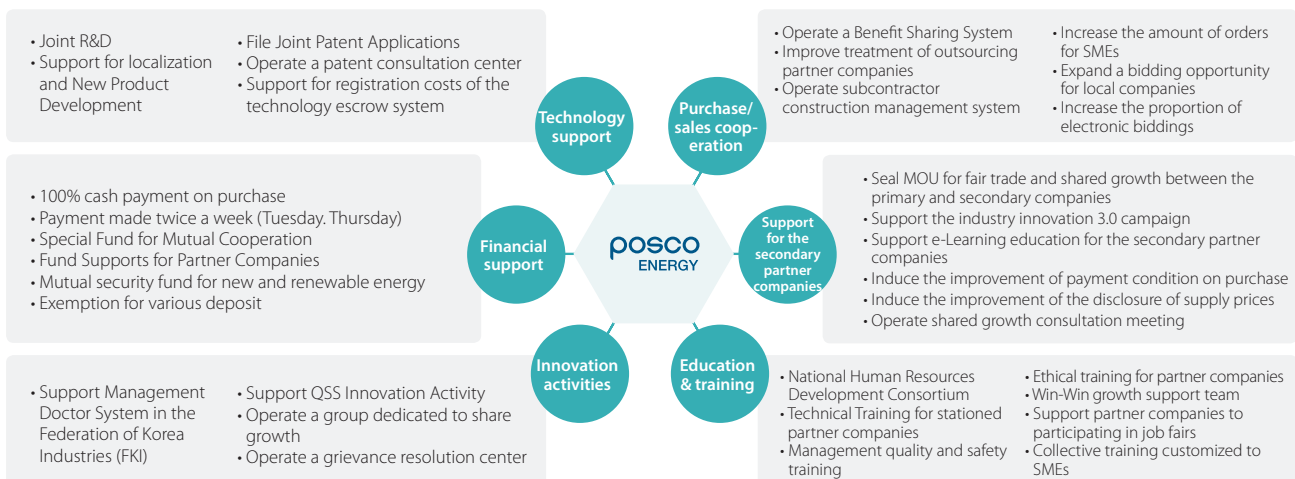
Sales agreement for Steam Turbine of 500KW



MOU for fostering SMEs with green technologies



FTA Country of Origin Management Training







# Local Community Investment and Engagement



## Understanding of Aspect

As the implementation of corporate responsibilities has become common practice, a number of companies are engaged in social services and contribution activities. However, it would be safer to say that there is much room for improvement in terms of the targets and nature of support, as they do not match what local communities actually need. In recognition of this, POSCO ENERGY searches for ways to offer substantial support through close cooperation with local communities and organizations, pursuing social contribution activities focused on local communities.



## Introduction to Core Issue

POSCO ENERGY reconfirms the fields of interest for stakeholders and determines the direction to lead its strategic efforts and future tasks to pursue. Among the core issues selected out of a materiality evaluation process, we identified "Operate Social Contribution Program with Local Community Development" under the core aspect of "Local community Investment and Engagement" in terms of the revitalization of local economy and the enlargement of development potential.

**Core Issue. 12**  
Operate Social  
Contribution  
Program with  
Local Community  
Development



**Aspect**  
Local Community Investment  
and Engagement



## Key Achievements and Goals

To realize the value of "Energy for a Better World", POSCO ENERGY is engaged in social contribution practices through employees' autonomous participation in sharing and voluntary work and company-led social contribution activities. The company runs the aged house remodeling work for energy efficiency improvement, solar power generator installations, electric safety inspection service as talent donation activities, etc. as the representative social contribution activities for the company's "Energy Dream Project." Starting from the western part of Incheon city in 2012, the "Energy Dream Project" will be extended to Pohang and Gwangyang. This will not just realize energy welfare, but also help those in need to lead safer and happier daily lives.

Classification	Achievement in 2014	Plans for 2015
Operate Social Contribution Program with Local Community Development	<ul style="list-style-type: none"><li>Expanded the areas to benefit from Energy Dream Projects</li><li>Achieved indirect job creation through the inclusion of self-support groups in construction work</li><li>Provided employees with an opportunity to partake talent donation activities</li><li>Received merit award from Incheon city for care for neighbors</li></ul>	<ul style="list-style-type: none"><li>Strengthen the representative project related to work</li><li>Promote employee volunteer service programs</li><li>Substantiate mentoring for university students Volunteer Corps.</li><li>Increase the participation rate of the 1% sharing fund and increase donor satisfaction</li></ul>

**“ Stakeholder Interview ”** Central Self-Sufficiency Foundation is in charge of supporting 246 local self-sufficiency centers throughout the nation and 14 metropolitan self-sufficiency centers to systematically run their self-support programs. The center has been developing new items for self-support programs for self-supporting work groups and self-support enterprises and sealed a partnership with POSCO ENERGY. As part of the key activities of the partnership, a self-support enterprise carries out energy-efficiency improvement projects, which have resulted in favorable performance: creating new jobs, heightening the income level of the lower income class, and saving energy costs for the energy deprived. The project has been positively recognized from the initial stage, and I wish to continue these performances. I hope to be engaged in many more similar projects through the partnership with POSCO ENERGY and consequently attract more attention and participation from society.



Central Self-Sufficiency  
Foundation Manager,  
Young-seok Park

## Social Contribution at a Glance

POSCO ENERGY is aggressively engaged in social contribution activities with an emphasis on local communities so as to materialize the value, 'Energy for a Better World.'

Slogan

Energy for a Better World

Signature program

Energy Dream



Support the energy-deprived to enjoy warm and safe places to live

Community Child Center that Brightens the world



Support Community Child Centers around the world power plants with human/material resources

Performance

Where

- Three districts, the western part of Incheon, Pohang, Gwangyang

Who

- For **57** households & **6** welfare centers
- **223** employees participated in voluntary work **9** times

What

- Energy-efficiency remodeling, solar power generator installation, electric safety inspection service as talent donation, Winter KIT sharing

Effect

- Indirect job creation by the self-support enterprise during construction work: **90** persons
- Energy-cost saving for beneficiaries: **18,812** thousand KRW /year
- Favorable effect to Environment Lowered CO<sub>2</sub> emission: **62,819**kg (equivalent to planting **11,218** trees)

Where

- **10** Community Child Center in the western part of Incheon

Who

- For about **250** children
- Mentoring by a total of **100** university student volunteer corp.

What

- University students volunteer as study mentors
- Improve the environment of Community Child Center

Effect

- Through a total of **4,576** hours of voluntary service, university students grow into sharing leaders (completion rate **92%**)
- Children were able to get closer to their dreams of a brighter future / Great help for the head of the Community Child Center (**100%** satisfaction rate)

Volunteer service by employees

### BEST volunteer activity

Basic

Sharing Saturday  
Basic volunteer activity operated by division

Entertaining

Themed volunteer activity  
volunteer activity with fun experience

Strategic

Energy volunteer activity  
Volunteer activity to realize energy welfare

Together

Family volunteer activity  
Volunteer activity jointly conducted by POSCO Family

1% Sharing

Raise social contribution fund by 1% salary reduction and the company's matching grants

Company donation

**6,532**million KRW

+

Development fund

**760**million KRW

+

1% sharing fund

**142**million KRW



Financial resource for social contribution activities

**7,434**million KRW



Employees' volunteering hours

**24,353**hours

\* 24.9 hours/person

### Palgeum-myeon Public Service center

POSCO ENERGY built convenient facilities that include a soccer field, public bathroom, and restaurant for local residents so they could use the center as a place for rest, cultural events, and communication. The public service center was built as a token of appreciation for local residents and their active cooperation during the Shinan Solar Power Plant (14.5MW) projects. The center will be later donated to Shinan-gun for more effective operation. POSCO ENERGY strives to attain co-prosperity with local residents under its social contribution slogan of "Energy for a Better World."



## Social Contribution Program with Local Community Development

### Energy Dream (formerly Sharing Love with Energy of Hope)

Capitalizing upon the company's characteristics and forte, POSCO ENERGY has been pursuing social contribution activities to realize energy welfare for the energy deprived, estimated to amount to 1,500 thousand households in Korea since 2012.

#### Key activities and performance

In 2014, through the MOU with the Ministry of Public Safety and Security, the company carried out safety inspections on electricity, gas, and fire and offered some necessary equipment and facilities to assist with energy welfare and improve the daily safety of those in need.

Classification	Description	Beneficiary	Amount of annual energy saving costs	Annual CO <sub>2</sub> reduction	Remarks
Energy efficiency improvement for aged houses	Replacement double pane windows, insulation work, aged boiler replacement, floor work, etc.	17 households 6 facilities	14,271 thousand KRW	55,801kg (equivalent to planting 9,965 trees)	Create indirect jobs for installation works through a self-support enterprise
Solar power generator installation	Solar power generator installation	2 facilities (overlapped with the above)	1,147 thousand KRW	5,176kg (equivalent to planting 924 trees)	
Electric Safety Inspection service as talent donation	Replacement LED lights, electric safety inspection on aged electrical facilities and replacement, Provision of goods, etc.	40 households	3,395 thousand KRW	1,842kg (equivalent to planting 329 trees)	
Making winter KIT for the energy deprived	Prepare and deliver items useful during winter in a KIT	150 households			



Energy-efficiency improvement for aged houses (CEO's voluntary service)



Solar power generator installation for welfare Center



Electric Safety Inspection service as Talent donation



Making winter KIT for the energy deprived

#### Future Plan

- **Change the project title:** Sharing Love with Energy of Hope → Energy Dream  
We changed the title of the project from 2015 in the hope that it would help the energy deprived reach for their dreams of a better tomorrow by providing more energy benefits.
- **Increase Employees participation in voluntary work:** designate "Energy Dream" Week by division  
Encourage more employee participation in voluntary services to proactively communicate with residents in the local community.
- **Effort to strengthen daily safety of the beneficiary:** Again in 2015, we plan to provide more support to the underprivileged to improve their daily safety under the MOU with the Ministry of Public Safety and Security, as well with the cooperation of other authorities such as the Korea Electrical Safety Corporation and the Korea Gas Safety Corporation.

### Community Child Center that Brightens the World

POSCO ENERGY dispatches a group of university student volunteers, the so-called "Energy of Hope" corps, to ten Community Child Centers. There, the children of energy deprived families visit and spend time after school. The centers are located around the LNG Combined Cycle Power plant in Seo-gu, Incheon for mentoring these children. The company also takes the lead in community education as it provides comprehensive support for these centers in terms of cooling/heating costs, facility repair/maintenance, surrounding environment improvement, etc.

#### Key activities and performance

University student volunteer corps visit the Community Child Centers to provide various forms of assistance such as mentoring support, facility repair/maintenance (3 centers), mural painting for improving the environment (4 centers), and DIY furniture support (6 centers). The company also offered occupation experiences and held energy camps to help children to establish a clearer vision of what they want for their futures. Children were also provided with new stationary kits for the new school semester.

### Details on university student volunteer corps. Activities

Group	No. of volunteers (persons)	Period (Months)	Completion rate (%)	Service hour (hours)	No. of children (persons)
3rd	50	5	92	2,326	254
4th	50	5	92	2,250	255

※ Completion criteria: Participation in weekly mentoring activity for 16 weeks or more

### Future Plan

#### • Extend the period of university student volunteer service:

2 Groups/ Five months/ Year → 1 Group/ Eight months/ Year

Reflect the high resumption rates of the previous volunteer corps requested from the Community Child Center and develop more stable rapport with children.

#### • Build stronger safety awareness among children

Plan to offer “visiting service for safety education” to the children and invite them to the safety experience center to help develop a stronger safety awareness.

### Satisfaction of the Community Child Centers



Very satisfied **95%**



Satisfied **5%**

※ A survey was conducted in a meeting with the heads of the Community Child Centers after completion of the voluntary service in 2014



The 3rd “Energy of Hope” Inauguration ceremony



Making furniture for Community Child Center



Preparation of stationary kit for children



1% Sharing Letter

### 1% Sharing Fund

Initiated by POSCO ENERGY executives on October 2011, the 1% Sharing Campaign is now joined by around 90% of POSCO ENERGY employees. The fund was previously managed by each division, but since 2014, it is now managed by an integrated decision-making body, the company-wide sharing fund committee, which determines the use of funds in a way employees approve. The company has also published a 1% sharing letter since 2014 that discloses how the funds have been executed to allow contributors, POSCO ENERGY employees, to easily access the details. As the company also donates a matching grant to the 1% Sharing Fund, and the program has been positioned as the social contribution funds jointly participated by labor and management. This voluntary sharing program by employees was highly recognized and consequently rewarded with the Certification of Commendation for Love of Neighbors by the mayor of Incheon in 2014.



Certification of Commendation for Love of Neighbors

### Employees' BEST Voluntary Activities

There are four types of volunteer activities available for POSCO ENERGY employees to practice sharing with others in the local community: Sharing Saturday (Basic), the company-wide monthly volunteer activities by division or small-groups in conjunction with volunteer organizations, Themed voluntary service (Entertaining) to participate with employee families and university student volunteer corps, Energy volunteer activity (Strategic) to realize energy welfare, and Family voluntary service (Together) to be held as a unified POSCO Family. All of these activities allow POSCO ENERGY to forge strong relationships with the local communities and stakeholders.



Sharing Saturday



Themed volunteer activity



Energy volunteer activity



Family volunteer activity



# Appendix

Financial Information

Sustainability Management Performance Data

GRI G4 Index

Independent Assurance Report

UN Global Compact

Memberships of Association

## Financial Information

### Statements of Financial Position (KRW)

Classification		16 <sup>th</sup> (December 31, 2014)	15 <sup>th</sup> (December 31, 2013)
Assets	Current assets	627,161,833,115	739,128,385,002
	- Quick assets	509,515,381,029	634,197,502,013
	- Inventory assets	117,646,452,086	104,930,882,989
	Non-current assets	4,363,752,137,488	3,444,409,327,132
	- Invested assets	483,425,382,827	203,113,578,398
	- Tangible assets	3,125,812,500,143	3,128,641,784,565
	- Intangible assets	597,666,158,618	16,312,839,736
	- Other non-current assets	156,848,095,900	96,341,124,433
Total assets		4,990,913,970,603	4,183,537,712,134
Liabilities	Current liabilities	605,695,430,205	703,223,913,504
	Non-current liabilities	2,818,917,100,754	1,916,144,557,345
	Total liabilities	3,424,612,530,959	2,619,368,470,849
Equity	Equity Attributable to Owners of the Parent	1,526,455,632,922	1,545,951,755,415
	- Equity capital	225,974,030,000	225,974,030,000
	- Hybrid capital equity	498,468,200,000	498,468,200,000
	- Capital surplus	364,942,405,688	364,458,516,956
	- Capital adjustments	(5,198,776,050)	(4,436,356,138)
	- Other capital components	(15,361,148,192)	(1,040,797,628)
	- Retained earnings	457,630,921,476	462,528,162,225
	Non-controlling Interests	39,845,806,722	18,217,485,870
Total equity		1,566,301,439,644	1,564,169,241,285
Total liabilities and equity		4,990,913,970,603	4,183,537,712,134

### Statement of Income (KRW)

Classification	16 <sup>th</sup> (December 31, 2014)	15 <sup>th</sup> (December 31, 2013)
Revenue	2,598,558,396,867	2,901,251,348,567
Cost of sales	2,364,099,705,256	2,588,004,320,217
Gross profit	234,458,691,611	313,247,028,350
Selling, general, and administrative expenses	115,806,767,302	86,656,703,127
Operating income	118,651,924,309	226,590,325,223
Gains (loss) from equity method in associates	(4,983,108,810)	(21,912,023,981)
Financial income (expense)	(63,475,618,745)	(23,029,042,129)
Other non-operating income (expense)	(42,663,109,597)	(30,230,089,159)
Income before income taxes	7,530,087,157	151,419,169,954
Income tax expenses	(14,766,133,601)	25,145,519,199
Net income	22,296,220,758	126,273,650,755
Other comprehensive income (expense)	(16,599,812,953)	4,836,187,801
Total comprehensive income (expense)	5,696,407,805	131,109,838,556
Net income attributable	22,296,220,758	126,273,650,755
Total comprehensive income attributable	5,696,407,805	131,109,838,556
Earnings per share	64	2,658

## Statement of Changes in Equity (KRW)

Classification	Equity attributable to owners of parent							Shares	Total
	Equity capital	Hybrid Capital equity	Capital surplus	Capital adjustments	Other capital components	Retained earnings	Sub-total		
1 January 2013 (At the beginning of the prior period)	225,974,030,000		- 364,562,476,314	(3,903,259,171)	(5,831,018,650)	344,036,332,093	924,838,560,586	16,303,960,250	941,142,520,836
Total comprehensive income (expense):									
Net profit	-	-	-	-	-	126,364,530,731	126,364,530,731	(90,879,976)	126,273,650,755
Actuarial gain (loss) on post defined benefit pension plans	-	-	-	-	-	172,276,906	172,276,906	-	172,276,906
Gain and loss on valuation of available-for-sale securities	-	-	-	-	11,808,384,195	-	11,808,384,195	-	11,808,384,195
Unrealized gain on equity securities under equity method	-	-	-	-	(6,020,538,414)	-	(6,020,538,414)	-	(6,020,538,414)
Gain or Loss on overseas operations	-	-	-	-	(997,624,759)	-	(997,624,759)	(126,310,127)	(1,123,934,886)
Total comprehensive income (expense)	-	-	-	-	4,790,221,022	126,536,807,637	131,327,028,659	(217,190,103)	131,109,838,556
Transaction with shareholders:									
Hybrid bond issued	- 498,468,200,000		-	-	-	-	498,468,200,000	-	498,468,200,000
Hybrid bond dividends	-	-	-	-	-	(8,216,953,420)	(8,216,953,420)	-	(8,216,953,420)
Paid-in capital increase in subsidiary	-	-	-	(488,577,980)	-	-	(488,577,980)	3,085,089,580	2,596,511,600
Equity change in subsidiary	-	-	(1,202,481)	(5,588,462)	-	-	(6,790,943)	(954,373,857)	(961,164,800)
Others	-	-	(102,756,877)	(38,930,525)	-	171,975,915	30,288,513	-	30,288,513
December 31, 2013 (At the end of the prior period)	225,974,030,000	498,468,200,000	364,458,516,956	(4,436,356,138)	(1,040,797,628)	462,528,162,225	1,545,951,755,415	18,217,485,870	1,564,169,241,285
January 1, 2014 (At the beginning of the period)	225,974,030,000	498,468,200,000	364,458,516,956	(4,436,356,138)	(1,040,797,628)	462,528,162,225	1,545,951,755,415	18,217,485,870	1,564,169,241,285
Total comprehensive income (expense):									
Net profit	-	-	-	-	-	21,234,358,133	21,234,358,133	1,061,862,625	22,296,220,758
Actuarial gain (loss) on post defined benefit pension plans	-	-	-	-	-	(2,697,187,721)	(2,697,187,721)	(5,254,286)	(2,702,442,007)
Gain and loss on valuation of available-for-sale securities	-	-	-	-	4,782,146,560	-	4,782,146,560	-	4,782,146,560
Unrealized gain on equity securities under equity method	-	-	-	-	(22,984,269,341)	-	(22,984,269,341)	-	(22,984,269,341)
Gain or lose on overseas operations	-	-	-	-	3,881,772,217	-	3,881,772,217	422,979,618	4,304,751,835
Total comprehensive income (expense) Total	-	-	-	-	(14,320,350,564)	18,537,170,412	4,216,819,848	1,479,587,957	5,696,407,805
Transaction with shareholders									
Hybrid bond dividends	-	-	-	-	-	(24,186,999,992)	(24,186,999,992)	-	
Consolidated new addition and change of scope	-	-	298,009,608	(626,445,283)	-	752,588,831	424,153,156	15,162,374,576	(24,186,999,992)
Others	-	-	185,879,124	(135,974,629)	-	-	49,904,495	4,986,358,319	5,036,262,814
December 31, 2014 (At the end of the period)	225,974,030,000	498,468,200,000	364,942,405,688	(5,198,776,050)	(15,361,148,192)	457,630,921,476	1,526,455,632,922	39,845,806,722	1,566,301,439,644

**Statements of Cash Flows (KRW)**

Classification	16 <sup>th</sup> (December 31, 2014)	15 <sup>th</sup> (December 31, 2013)
I. Net cash provided by operating activities	351,635,876,168	238,648,081,426
1. Net cash provided by operating activities	449,601,961,685	361,922,569,787
a. Net income	22,296,220,758	126,273,650,755
b. Adjustments	290,257,513,472	232,023,112,679
c. Changes in assets and liabilities resulting from operations	137,048,227,455	3,625,806,353
2. Interest received	4,040,883,534	4,725,330,067
3. Dividend received	21,132,578	3,322,554
4. Interest paid	(83,904,160,411)	(78,331,413,098)
5. Income taxes paid	(18,123,941,218)	(49,671,727,884)
II. Net cash used in investing activities	(1,072,879,411,115)	(986,809,859,916)
1. Cash inflows from investment activities	55,708,816,153	5,907,154,379
2. Cash outflows for investment activities	(1,128,588,227,268)	(992,722,111,095)
III. Net cash provided by financing activities	748,578,377,305	748,243,270,294
1. Cash inflows from financing activities	1,249,190,159,498	1,358,997,900,572
2. Cash outflows for financing activities	(500,611,782,193)	(610,754,630,278)
IV. Effects of exchange rate changes on cash and cash equivalents	372,627,719	90,822,986
V. Increase (decrease) in cash and cash equivalent (I+II+III+IV)	27,707,470,077	172,314,790
VI. Cash and cash equivalents at the beginning of year	195,493,981,482	195,321,666,692
VII. Cash and cash equivalents at the end of year	223,201,451,559	195,493,981,482

## Sustainability Management Performance Data

### Economic Performance Indicators

Category		Unit	2012	2013	2014
Power generation & transmission	Generation	MWh	15,791,978	16,032,516	15,442,298
	Transmission		15,424,543	15,628,532	15,399,328
	Transmission loss	%	0.002	0.003	0.003
Government subsidy <sup>1)</sup>		KRW Million	8,675	4,989	1,134
R&D <sup>2)</sup>	Manpower	Person	69	65	126
	Costs	KRW 100 Million	183	161	251

1) Estimated based on new and renewable energy Feed-in Tariffs and the government subsidies to carry out national projects. In 2014, it only includes costs to carry out national projects.

2) Calculated based on business report

### Environmental Performance Indicators

Category		Unit	2012	2013	2014
Fuel consumption	LNG	Nm <sup>3</sup>	2,540,069,749	2,603,784,684	2,111,669,633
	BFG		4,834,404,296	5,091,653,614	7,269,361,117
	COG		51,319,218	58,652,766	76,044,310
	FOG		-	110,983,038	1,101,234,885
Energy consumption		TJ	128,403	131,819	123,016
GHG emission <sup>3)</sup>	Total	tCO <sub>2</sub>	9,863,100	11,048,184	12,005,234
	Scope1		9,849,384	11,035,778	11,966,409
	Scope2		13,716	12,406	38,829
Water consumption		ton	2,080,858	2,079,558	2,906,563
Effluent water discharged			1,427,948	1,223,459	2,205,956
Waste	Total	ton	1,126.5	1,202.1	1,597.1
	General waste		1080.0	1172.7	1,422.5
	Specified waste		46.5	29.4	174.6
	Waste recycling rate	%	37.9	44.8	36.4
Environmental investments <sup>4)</sup>		KRW million	7,563	48,682	9,672

3) The data for year 2013 has been modified due to the change in the GHG estimation method for Off-gas Combined Cycle Power generation proposed by the government.

4) The data for years 2012 and 2013 has been modified due to the expansion of the reporting range of business premises and categories to calculate environmental investment costs.



## Social Performance Indicators

Category		Unit	2012	2013	2014
Total number of employees			861	1,010	1,079
By region	Seoul		147	206	267
	Incheon		326	320	336
	Pohang		318	361	409
	Gwangyang		56	107	61
	Overseas		14	16	6
By gender	Male		784	909	961
	Female		77	101	118
By job category	Regular job total	person	577	636	768
	Regular job (male)		501	556	658
	Regular job (female)		76	80	110
	Specialized job total		252	312	279
	Specialized job (male)		251	310	277
	Specialized job (female)		1	2	2
By employment type	Regular		829	948	1,047
	Temporary		32	62	32
Turnover rate		%	1.7	2.3	2.1
Rate of job return after maternity leave			100	100	100
Total education & training cost		KRW 100 Million	10.9	8.9	9.4
Usage rate of flexible working system		%	36	25.0	23.6
Happiness index		point	75.1	81.4	77.0
Average volunteer hours		hr/person	34.2	28.9	24.9
Benefit Sharing cost		KRW 100 Million	5.6	7.8	7.0
Labor union membership rate		%	65	57.7	65.9

Unit		Regular job		Specialized job	
Employees scheduled to retire by job type	person	Within 5 years	Within 10 years	Within 5 years	Within 10 years
		9	47	13	31

## GRI 4.0 & ISO 26000 Index

GRI G4			ISO26000	Page	Remarks
<b>1. General Index</b>					
a. Strategy & analysis	G4-1	The top decision-maker of the organization for decisions about the relevance of sustainability and its strategy	4.7, 6.2,	19	
	G4-2	Key risks and opportunities	7.4.2	10-11,33-35	
b. Organiza- tion profile	G4-3	Name of the enterprise		8-9	
	G4-4	Primary brand, products, and services		8-9	
	G4-5	Headquarters - Location of headquarters		8-9	
	G4-6	The number and the names of countries where either it has key business premises or activities that are specifically relevant to sustainability management		8-9	
	G4-7	Nature of ownership and legal form		8-9	
	G4-8	Markets served		8-9	
	G4-9	Size of the organization		8-9, 56-58	
	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. Case that 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)	6.3.10, 6.4.1-6.4.5, 6.8.5, 7.8	60	
	G4-11	Percentage of total employees covered by collective bargaining agreements		-	All em- ployees
	G4-12	Supply Chain		48-50	
	G4-13	Significant changes during the reporting period regarding size, structure, ownership, or supply chain		8-9, 60	
	G4-14	Explanation of whether and how the precautionary approach or principle is addressed by the organization		68	
	G4-15	Voluntary economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.		68	
	G4-16	Memberships in major associations		69	
	EU1	Installed capacity by power source		8-9	
	EU2	Energy output by power source		59	
c. Identified Material / Aspects and Boundaries	G4-17	a. All entities included in the organization's consolidated financial statements or equivalent documents b. List of any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report.		9	
	G4-18	a. Process for defining the report content and the aspect boundaries b. The reporting principles for defining report content has been implemented		20-21	
	G4-19	List all the material aspects identified by the Materiality Evaluation Process	5.2, 7.3.2-7.3.4	21	
	G4-20	Report boundary for each material aspect within the organization		About This Report	
	G4-21	Report boundary for each material aspect outside the organization		About This Report	
	G4-22	The effect of any restatements of information provided in previous reports and the reasons for such restatements		-	N/A
	G4-23	Modifications of information from previous reporting periods		59	
		DMA(Disclosures on Management Approach)		23	
d. Stakeholder Engage- ment	G4-24	A list of stakeholder groups engaged by the organization		23	
	G4-25	Basis for identification and selection of stakeholders with which the company is engaged		23	
	G4-26	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group and the engagement process for reporting preparation	5.3	23	
	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 as well as the outcomes (key issues by stakeholder type)		23	
e. Report Profile	G4-28	Reporting Period	7.5.3, 7.6.2	About This Report	
	G4-29	Publication date of most recent previous report		About This Report	
	G4-30	Reporting cycle		About This Report	

GRI G4		ISO26000	Page	Remarks
e. Report Profile	G4-31	Contact point for questions regarding the report or its contents		About This Report
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	G4-33	a. Policy and current practice with regard to seeking external assurance for the report b. The scope and basis of any external assurance provided. (Separately specify if not included in the assurance report) 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		66-67
		DMA(Disclosures on Management Approach)		18
f. Report Profile	G4-34	Organization chart of the highest governance body including the committee, the list of committees responsible for the subjects of economy, society, and environment		18-19
	G4-35	Process for delegating authority for economic, environmental, and social topics from the highest governance body to senior executives and other employees		18-19
	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 the highest governance body		18-19
	G4-37	Process for consultation between stakeholders and the highest governance body on economic, environmental, and social topics (if delegated, specify to whom it was delegated and include a feedback process to report to the highest governance body)		18-19
	G4-38	Report the composition of the highest governance body and its committees		18-19
	G4-39	Indicate whether the Chair of the highest governance body concurrently holds the position of an executive officer		18-19
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	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		18-19
	G4-43	Measures taken to develop and enhance the highest governance body's expertise in 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. whether stakeholder consultation is used to support the highest governance body's identification and management of economic, environmental, and social impacts, risks, and opportunities	6.2, 7.4.3	18-19
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	G4-47	The frequency of the highest governance body's review of economic, environmental, and social impacts, risks, and opportunities		18-19
	G4-48	The highest position that formally reviews and approves the organization's sustainability report and ensures that all material aspects are covered		19
	G4-49	Process for communicating critical concerns to the highest governance body		18
	G4-50	The nature and total number, frequency, and resolution of critical concerns that were communicated to the highest governance body and the grievance resolution mechanism 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. The performance criteria in the remuneration policy related to the highest governance body's and senior executives' economic, environmental, and social objectives		18
	G4-52	Process to determine remuneration		18
	G4-53	Whether and how stakeholders' views are pursued and taken into account regarding remuneration		18
	G4-54	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	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. Governance		DMA(Disclosures on Management Approach)		14-15
	G4-56	The organization's codes of conduct or codes of ethics		14
	G4-57	The internal and external mechanisms for seeking advice on ethical and lawful behavior, as well as matters related to organizational integrity, such as helplines or advice lines	7.7.5, 4.4, 6.6.3	14
	G4-58	The internal and external mechanisms for reporting concerns about unethical or unlawful behavior		14

\* Any indicators marked with a "-" is either non-disclosed due to the company's internal policy or planned to be reported later.

GRI G4		ISO26000	Page	Remarks
<b>2. Specific Index</b>				
Indicators by issue				
Economic				
Economic performance	DMA(Disclosures on Management Approach)		26	
	G4-EC1	Economic value generated and distributed	6.8.1-6.8.3, 6.8.7, 6.8.9	10-11
	G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	6.5.5	32-35
	G4-EC3	Coverage of the organization's defined benefit plan obligations	6.8.7	- -
	G4-EC4	Financial assistance received from government	-	59
Market Presence	G4-EC7	Investments and services supported for the public goods	6.3.9, 6.8.1-6.8.2, 6.8.7, 6.8.9	52-54
	G4-EC8	Indirect economic 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	10-11, 29, 34-35
Procurement practices	DMA(Disclosures on Management Approach)		48	
	G4-EC9	Spending on local suppliers	6.4.3, 6.6.6, 6.8.1-6.8.2, 6.8.7	10-11
Demand Side Management	DMA(Disclosures on Management Approach)		59	
System Efficiency	DMA(Disclosures on Management Approach)		26	
	EU11	Generation efficiency by power source		31
	EU12	Transmission & distribution loss rate compared to total energy		59
Environmental				
Materials	G4-EN1	Materials used by weight or volume	6.5.4	33
	G4-EN2	Percentage of materials used that are recycled input materials	6.5.4	37
Energy	DMA(Disclosures on Management Approach)		32	
	G4-EN3	Direct energy consumption within the organization	6.5.4	33
	G4-EN4	Energy consumption outside of the organization	6.5.4	59
	G4-EN5	Energy intensity	6.5.4	33
	G4-EN6	Reduction of energy consumption	6.5.4-5	33
	G4-EN7	Reductions in energy requirements of products and services	6.5.4-5	33
Water	DMA(Disclosures on Management Approach)		32	
	G4-EN8	Total water withdrawal by source	6.5.4	37
	G4-EN9	Water sources significantly affected by withdrawal of water	6.5.4	37
	G4-EN10	Percentage and total volume of water recycled and reused	6.5.4	37
Biodiversity	G4-EN11	Operational sites owned, leased, or managed in habitats of high biodiversity value or protected areas	6.5.6	- N/A
	G4-EN12	Significant impacts of activities, products, and services on biodiversity in protected areas and habitats of high biodiversity value	6.5.6	- N/A
	G4-EN13	Habitats protected or restored	6.5.6	- N/A
	G4-EN14	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations (by region, by level of extinction risk)	6.5.6	- N/A
Emissions	DMA(Disclosures on Management Approach)		32	
	G4-EN15	Direct greenhouse gas (GHG) emissions	6.5.5	33
	G4-EN16	Indirect greenhouse gas (GHG) emissions	6.5.5	59
	G4-EN17	Other indirect greenhouse gas (GHG) emissions	6.5.5	- -
	G4-EN18	Greenhouse gas (GHG) emissions intensity	6.5.5	33
	G4-EN19	Reduction of greenhouse gas (GHG) emissions	6.5.5	33
	G4-EN20	Emissions of ozone-depleting substances (ODS)	6.5.3, 6.5.5	- N/A

GRI G4		ISO26000	Page	Remarks
Emissions	G4-EN21	NOx, Sox, and other significant air emissions	6.5.3	37
	DMA(Disclosures on Management Approach)		32	
Effluents and Waste	G4-EN22	Total water discharge by quality and destination	6.5.3-4	37
	G4-EN23	Total weight of waste by type and disposal method	6.5.3	37
	G4-EN24	Total number and volume of significant hazardous spills	6.5.3	- N/A
	G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex and percentage of transported waste shipped internationally	6.5.3	- N/A
	G4-EN26	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff	6.5.3	- N/A
Product and Service	G4-EN27	Extent of impact mitigation of environmental impacts of products and services	6.5.3, 6.5.4, 6.5.5, 6.7.5	10-11, 34-35
	G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category	6.5.3, 6.5.4, 6.7.5	- N/A
Compliance	G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	4.6	- N/A
Transport	G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	6.5.4, 6.6.6	- N/A
Overall	G4-EN31	Total environmental protection expenditures and investments by type	6.5.1-6.5.2	59
Supplier environmental Assessment	G4-EN32	Percentage of new suppliers that were screened by using environmental criteria	6.3.5, 6.6.6, 7.3.1	49
	G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	6.3.5, 6.6.6, 7.3.1	-
Environmental Grievance Mechanism	G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	6.3.6	- None
Social				
Employment	DMA(Disclosures on Management Approach)		38	
	G4-LA1	Total number and rates of new employee hires and employee turnover	6.4.3	60
	G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	6.4.4, 6.8.7	39
	G4-LA3	Return to work and retention rates after parental leave by gender	6.4.4	60
	EU15	Percentage of employees eligible to retire in the next 5 and 10 years, broken down by job category and by region		60
	EU17	Policies and guidelines regarding health and safety of company employees and contractors and subcontractor employees		44
	EU18	Days worked by contractor and subcontractor employees involved in power plant construction, operation, and maintenance activities		- Compliant legal working hours
Labor Management	G4-LA4	Minimum notice periods regarding operational changes	6.4.3, 6.4.5	40
Occupational Health and Safety	DMA(Disclosures on Management Approach)		38	
	G4-LA5	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	6.4.6	43
	G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities by region and by gender	6.4.6, 6.8.8	43
	G4-LA7	The number of workers with high incidence or high risk of diseases related to their occupation	6.4.6, 6.8.8	44
	G4-LA8	Health and safety topics covered in formal agreements with trade unions	6.4.6	43
Training and Education	G4-LA11	Percentage of employees receiving regular performance and career development reviews (by gender and by employee category)	6.4.7	42
Diversity and Equal Opportunity	G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	6.2.3, 6.3.7, 6.3.10, 6.4.3	60
Equal Remuneration for Women and men	DMA(Disclosures on Management Approach)		38	
	G4-LA13	Ratio of basic salary and remuneration of women to men by employee category	6.3.7, 6.3.10, 6.4.3, 6.4.4	-
Labor Practices Grievance Mechanisms	DMA(Disclosures on Management Approach)		38	
	G4-LA16	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms	6.3.6	40



GRI G4			ISO26000	Page	Remarks
Human Rights					
Investment	G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations	6.3.5	14	
Non-discrimination	G4-HR3	Total number of incidents of discrimination and corrective actions taken	6.3.6, 6.3.7, 6.3.10, 6.4.3	-	
Freedom of Association and Collective Bargaining	G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or 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	40, 68	
Child Labor	G4-HR5	Operations and suppliers identified as having significant risk of 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	40, 68	
Force or Compulsory Labor	G4-HR6	Operations and suppliers identified as having significant risk of 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	40, 68	
Security Practices	G4-HR7	Percentage of security personnel trained in the organization's human rights policies or procedures	6.3.4, 6.3.5, 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, 6.3.7, 6.3.8, 6.6.7, 6.8.3	-	N/A
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	DMA(Disclosures on Management Approach)			51	
	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	51-54	
	G4-SO2	Business premises with significant actual or potential negative impacts on local communities	6.3.9, 6.5.3, 6.8	52	
	EU22	Number of people physically or economically displaced and compensation, broken down by type of project		-	N/A
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	14-15	
	G4-SO5	Confirmed incidents of corruption and actions taken	6.6.1-6.6.3	14-15	
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
Sanctions	G4-SO8	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 by 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	49	
Grievance Mechanisms for Impact 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 Responsibility					
Product and Service Labeling	DMA(Disclosures on Management Approach)			45	
	G4-PR3	Type of product and service information required by the organization's procedures for product and service information and labeling, as well as percentage of significant products and service categories subject to such information requirements	6.7.1-6.7.5, 6.7.9	45-47	
	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
	G4-PR5	Results of surveys measuring customer satisfaction	3.7.1-6.7.2, 6.7.6	46	
Marketing	DMA(Disclosures on Management Approach)			45	
	G4-PR6	Sale of banned or disputed products	-	-	None
	G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship	4.6, 6.7.1-6.7.3	-	None
Accessibility	EU28	Power outage frequency in power plants		31	
	EU29	Average power outage duration		31	
	EU30	Average plant availability by energy source		31	

## Independent Assurance Report

### To the Stakeholders of POSCO ENERGY

The Korea Productivity Center ("the KPC" or "the assurance provider" hereafter) was commissioned to perform a third-party assurance engagement of the "2014 POSCO ENERGY Sustainable Management Report" ("the Report" hereafter) by POSCO ENERGY. The KPC presents its findings as follows.

### Responsibility and Independence

The responsibility for the information and statements included in the Report lies solely with POSCO ENERGY. The KPC is responsible for the assurance findings generated in the Report. As an independent assurance provider, the KPC was not engaged in the preparation of the Report in any other way and does not have any interest in POSCO ENERGY in a way that may hamper its independence as an assurance provider.

### Assurance Standards

The KPC performed a Type 2 moderate level assurance engagement in accordance with AA1000AS (2008)<sup>1)</sup>. Following these assurance standards, the KPC verified the Report against such principles as inclusivity, materiality, and responsiveness in accordance with AA1000APS (2008)<sup>2)</sup>. In addition, the KPC verified that the Report complied with the GRI G4 Guidelines.

### Limitations

This assurance engagement covers POSCO ENERGY's 2014 performance in accordance with the assurance standards stated above. The KPC verified the financial data through financial statements and publicly announced materials. In addition, the KPC verified the environmental and social performance data by performing a Type 2 and sample-based moderate level assurance engagement. On-site inspections were limited to POSCO ENERGY's corporate headquarters in Seoul, Korea, and it should be noted that the results may change if additional verification processes are carried out in the future.

### Assurance Methods

The KPC adopted the following methods in assuring this Report.

- The KPC verified that the Report met the requirements of the Comprehensive Option of the GRI G4 Guidelines.
- The KPC verified that the Report abided by the principles that concern the report content and quality in accordance with the GRI G4 Guidelines.
- The KPC, based on media research and benchmarking analysis, reviewed that major issues were selected and described appropriately in this Report.
- The KPC verified the appropriateness of the report content, and any errors regarding the representation of such content, through comparative analyses made with other sources.
- The KPC conducted on-site inspections of the Seoul headquarters to verify the evidence of major data and information as well as internal process and systems.

### Findings

The KPC believes that the Report is a sincere and fair representation of POSCO ENERGY's sustainability management initiatives and achievements. The KPC verified that the Report satisfies the requirements of the Comprehensive Option of the GRI G4 Guidelines.

The KPC has verified that the Comprehensive Option's requirements have been met in the case of General Standard Disclosures. As for Specific Standard Disclosures, the KPC has examined the DMA (Disclosure on Management Approach) and Indicators regarding the Material Issues that were derived from the following report item decision process.

- 1) AA1000 Assurance Standard (2008): A global assurance standard developed by Accountability that provides methods for reporting on an organization's management of sustainability issues beyond financial indicators including its adherence to the Accountability Principles Standard and the reliability of its sustainability performance information.
- 2) AA1000 Accountability Principles Standard (2008): A global assurance principles developed by Accountability that provides a framework for the AA1000 standards.

Material Issues	DMA & Indicators	Material Issues	DMA & Indicators
Aspect1 Economic Value Development	DMA - Economic Performance, G4-EC1 ~ G4-EC4 DMA - Demand-Side Management DMA - System Efficiency, G4-EU11 ~ G4-EU12	Aspect 3 Happy and Safe Workplace	DMA - Training and Education, G4-LA9 ~ G4-LA11 DMA - Labor Practices Grievance Mechanisms, G4-LA16
Aspect2 Eco-friendly Management Implementation	DMA - Energy, G4-EN3 ~ G4-EN7 DMA - Emissions, G4-EN15 ~ G4-EN21 DMA - Water, G4-EN8 ~ G4-EN10 DMA - Effluents and Waste, G4-EN22~ G4-EN26	Aspect 4 Customer Satisfaction Service	DMA - Product and Service Labeling, G4-PR3 ~ G4-PR5 DMA - Marketing Communications, G4-PR6 ~ G4-PR7
Aspect 3 Happy and Safe Workplace	DMA - Employment, G4-LA1 ~ G4-LA3, G4-EU15, G4-EU17, G4-EU18 DMA - Labor/Management Relations, G4-LA4 DMA - Occupational Health and Safety, G4-LA5 ~ G4-LA8	Aspect5 Fair Competition and Cooperation	DMA - Procurement Practices, G4-EC9
		Aspect 6 Local Community Investment and Engagement	DMA - Local Communities, G4-SO1 ~ G4-SO2, G4-EU22

**Inclusivity: Shareholder Engagement** POSCO ENERGY categorizes its stakeholders into six groups: partner companies, customers, shareholders and investors, employees, the local community, and the government, in compliance with the Principles of Inclusivity. The KPC verified that POSCO ENERGY clearly defined the communication channels and expectations of each group and garnered the opinions of its stakeholders through active interaction and dialogue.

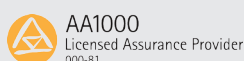
**Materiality: Selection and Reporting of Key Issues** Based on the issues of the last report, POSCO ENERGY has settled on 25 sustainable management issues by investigating the domestic and foreign energy industry issues, media analyses, and international standards in sustainable management such as the GRI G4 Guidelines, GRI electric industry supplementary indicators, ISO26000, UNGC, etc. Furthermore, six key issues have been deduced through the level of concern of outside stakeholders and the importance of business through the materiality evaluation, which have been reflected in a balanced manner in each of the Report's pages.

**Responsiveness: Organizational Response to Issues** The KPC verified that the Report properly demonstrates POSCO ENERGY's awareness of the key issues that would impact stakeholder judgment of its performance and that it undertook measures to resolve such issues. Through the Report, POSCO ENERGY is faithfully disclosing the actions and performance of their responses to key issues in sustainable management.

### Recommendations

KPC rates highly the range of endeavors and achievements made by POSCO ENERGY to advance its sustainability and presents the following recommendations to enhance POSCO ENERGY's future reports and its level of sustainability management.

- In order to examine and manage the performance of sustainable management activities, a proposal needs to be made based on a sustainable management strategy system and the key performance indicators (KPI) must be given form. Furthermore, continuously managing the selected sustainable management proposal and the KIP will allow POSCO ENERGY's sustainable management activities and performance to be reported to stakeholders in a more transparent and objective manner.
- As for the stakeholders' participation method, their opinions are being collected through surveys and employee interviews. There needs to be a strengthening of the activities for collecting the stakeholders' opinions in a more comprehensive manner as well as for verifying the expectations of POSCO ENERGY's annual sustainable management activities. We recommend collecting the stakeholder participation principle and plans and using various channels so that opinions can be continuously collected.



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The Korea Productivity Center Sustainability Management Center is an assurance agency officially certified by Accountability, which established AA1000 (international standards for stakeholder engagement and assurance), and is qualified to perform independent assurance engagements. Our Assurance Committee is comprised of competent experts who have ample experience in sustainability management consulting and assurance and have completed relevant professional training.

## UN Global Compact

Classification	Principles	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	14, 40, 49
	2 Make sure that they are not complicit in human rights abuses.	G4-HR1, G4-HR10, G4-HR11	14, 49
Labour 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	40, 60
	4 The elimination of all forms of forced and compulsory labor;	G4-HR6	40
	5 The effective abolition of child labor; and	G4-HR5	40
	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	40, 42
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	32-37
	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-EN25, G4-EN26, G4-EN27, G4-EN28	32-37
	9 Encourage the development and diffusion of environmentally friendly technologies	G4-EN29, G4-EN30, G4-EN31, G4-EN32, G4-EN33, G4-EN34	28, 32-37
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	14, 15

## Memberships of Associations

Seoul City Executive Committee for One Less Nuclear Power Plant	Energy & Climate Change Policy, Korea Energy Management Corporation	Korea CSR Society	Korea Electric Engineers Association
Creating Shared Value Forum	Energy Policy Council	Korea Construction Engineers Association	Korea Battery Industry Association
The Korea Chamber of Commerce & Industry	Best SM Forum	Korea Industrial Technology Association	Korea Photovoltaic Industry Association
Korea Electric Association	Incheon Employees Federation	Korea Fire Safety Association	Korea Wind Energy Industry Association
Future Environmental Study Forum	Incheon Safety Management Conference	The Korea New and Renewable Energy Association (KNREA)	Korea Chemicals Management Association
Independent Power Producer Association	Incheon Friends of Earth	Korea Energy Foundation	Korea Environmental Policy and Administration Society
Seoul City Executive Committee for One Less Nuclear Power Plant	Federation of the Korean Industries	Korea Engineering & Consulting Association	Energy & Mineral Resources Development Association of Korea
Korea Fire Safety Association	Jeonnam 5GW Wind Power Generation Association	Korea Electrical Contractors Association	Korea Environmental Engineers Association
Energy Management Forum	Korea Power Exchange	Korea Electric Engineers Association	Korea Environmental Preservation Association

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