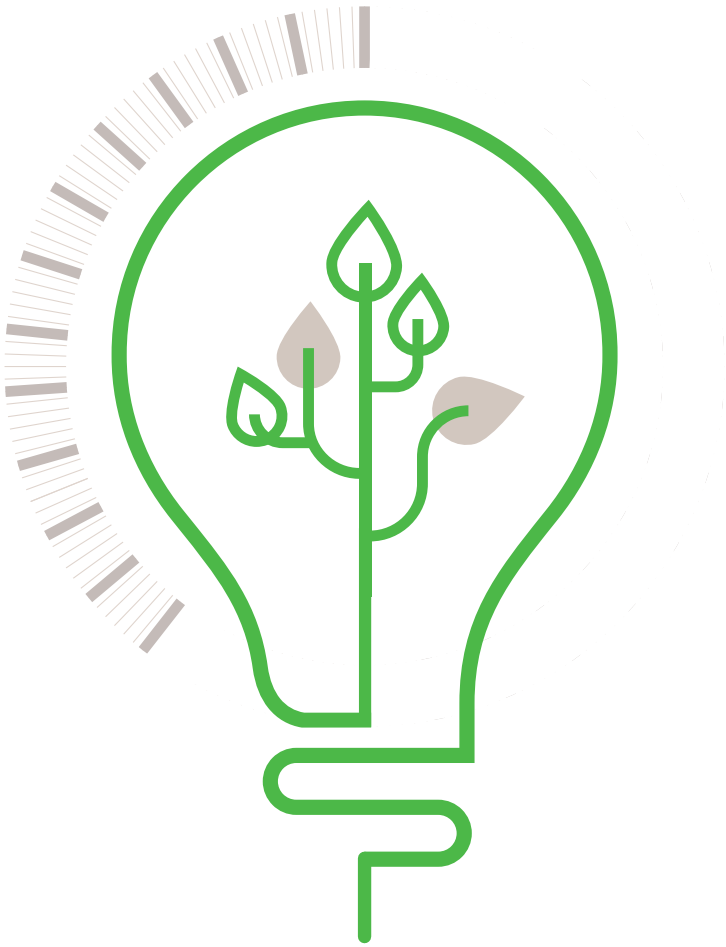
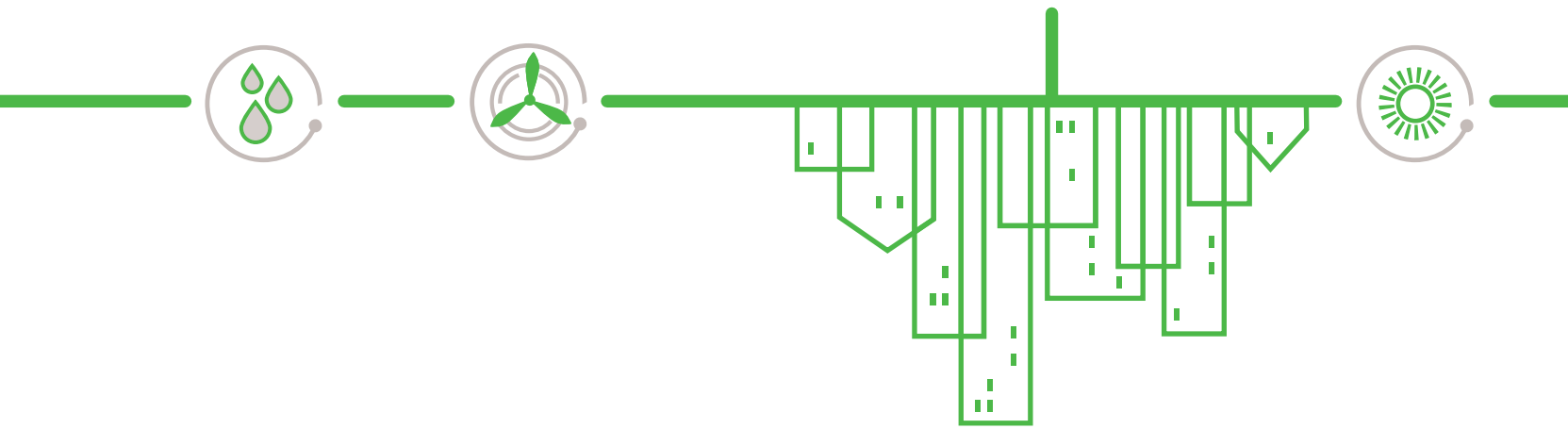
KOREA EAST-WEST POWER CO.,LTD.



11th Sustainability Report

We Make Energy for Happiness

EWP



ABOUT THIS REPORT

EWP is a public energy company. It takes its CSR into account in all decision-making processes. This report is the eleventh sustainability report intended to disclose the economic, social, and environmental efforts and outcomes in terms of corporate sustainability during the reporting period to all its stakeholders in the most transparent way.

In 2016, EWP has drawn six issues which were deemed most important by stakeholders through a stakeholder survey and a materiality assessment. Regarding those issues, this report has reported on sustainability management of EWP. In addition, it has attempted to reflect diverse perspectives and opinions by interviewing stakeholders for each issue. Lastly, it includes the roles and activities of EWP which has been contributing to UN Sustainable Development Goals (SDGs), a new global agenda to create sustainable society by 2030.

Reporting Guideline

GRI (Global Reporting Initiative) Standards
Core Option

Reporting Scope

Head office, and five business operations
in Dangjin, Ulsan, Honam, Donghae and Ilsan

Reporting Period

January 1, 2016 – December 31, 2016

Reporting Intervals

Annual reporting
(issuance of the previous report: August 2016)

Inquiries

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Power Generation Division, Korea East-West Power
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INTRODUCING EWP

Dear Stakeholders,

I am deeply grateful for your keen attention and support for the sustainability management efforts of EWP

Korea's energy industry has seen a decline in demand for electric power due to the economic downturn, and we are met with a paradigm shift in the strengthening of environmental regulations which include energy conversion policies, the Paris Agreement, and fine dust issues. EWP is reaffirming its mission to provide stable, economical and environmentally friendly power to citizens, while simultaneously securing competitiveness in the new energy industry to promote the sustainability of the enterprise. Along with this, we are actively fulfilling our social responsibilities to be mutually engaged in the happiness of citizens to reemerge as a corporation loved by the people.

2016 was an important period for securing a foothold in new industries in accordance with the paradigm shift in the energy industry. As a result of continuous efforts to develop the renewable energy business, EWP has completed the construction of the Seongmun Biomass Power Plant, and has commenced construction of Yeonggwang Wind Farm and Gyeongju Wind Farm Unit 2. In addition, we will promote energy convergence-complexes such as Dangjin e-Dream Park and Ulsan e-Clean City, expecting to secure a facility capacity of 5,081MW of renewable energy by 2030. Furthermore, in order to promote high value-added business by innovating and converging the company's core technologies of power plant operation systems, technical manpower, and intellectual property with Industry 4.0 technology, we have newly established a specialized organization for power generation technology solutions, and continued to develop products for both short-term and long-term solutions.

EWP is actively responding to environmental issues arising from the Paris Agreement and fine dust, as demanded by Korean citizens. We have secured a reduction of 2.7 million tons of greenhouse gas emissions by the emissions trading system, achieving the highest level within the domestic power generation sector. To achieve this, we promoted a variety of measures to reduce greenhouse gas emissions, such as the introduction of high-efficiency power plants and the expansion of bio-energy, and actively participated in the development of new technology that includes CO_2 separation membrane technology and the production of high-value carbon-utilizing compounds. Additionally, in response to an issue of national interest to preemptively reduce fine dust, we set a goal to reduce the amount of air pollutant emissions by 77% by 2030 compared to 2015, and plan to reduce pollutant emissions through the immediate reinforcement of environmental facilities and improvement of facility efficiency. In addition, we are striving to reemerge as an eco-friendly power plant that people can place their trust, by promoting pasture land cultivation from ash disposal grounds, converting coal storage facilities, and implementing the marine resource conservation project utilizing hot wastewater.

In order to foster innovative leaders to head the energy industry paradigm change and to lead a "Great Company," EWP is currently establishing and implementing three major strategies for human resource development: cultivating future-responsive innovation, enhancing personnel capacity, and reinforcing organizational cohesion. To cultivate innovative leaders who will lead future businesses, we have institutionalized leadership education with consideration for professional skills in each position, and we are currently operating an integrated support system for the establishment of book cafes in all workplaces and EWP's reading management for all employees. Moreover, we are strengthening organizational cohesion through various types of organizational activation education for generational convergence. In addition, we are spreading the smart-office culture of our head office to all of our business operations as the first public corporation to do so, establishing the EWP style personnel development system, and leading with an organizational culture of collaboration and communication.

Publishing its 11th sustainability report from 2007, EWP has been making efforts to examine its economic, social, and environmental impacts on the local community. This year's report transparently presented the activities and achievements of EWP, focusing on the six major issues identified by the voices of the public, our stakeholders. We ask for your continued support and encouragement of our efforts to open a bright future with the local communities of EWP.

Thank you.

December 5, 2017
Acting CEO of EWP

Park Hee-sung

About EWP

Overview

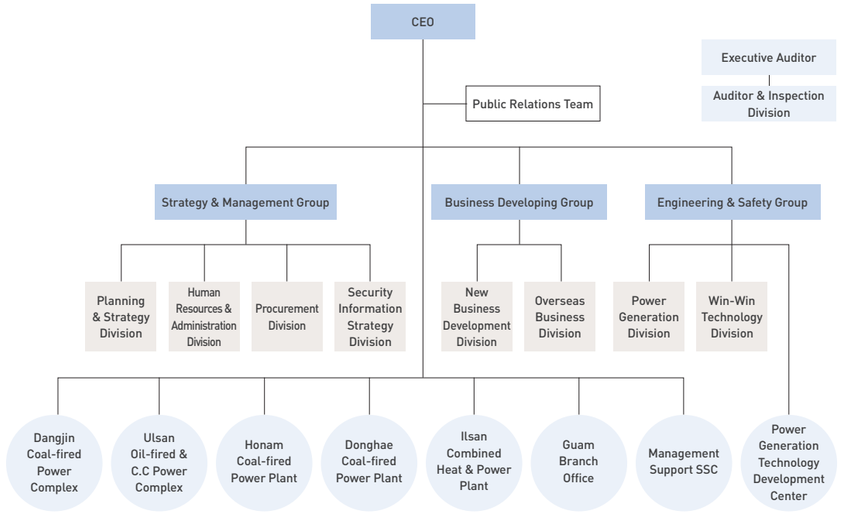
Corporation Overview

EWP has been focusing on power generation as its core business. The total capacity of power generation facilities in five cities stands at 11,170MW or 9.5% of the country's total power generation. EWP sells its electricity to KEPCO(Korea Electric Power Corporation) through Korea Power Exchange for final consumption by consumers. In 2015, EWP produced a total of 52,104GWh of electricity.

Date of foundation April 2, 2001	CEO Vacant	Head Office 395, Jongga-ro, Jung-gu, Ulsan	Composition of Shareholders KEPCO 100%	Major Business Power resource, power generation, etc.	Total Power Output 52,104GWh
Sales Volume 46,620GWh	Electricity Sales KRW 4.1679 trillion	Capital KRW 4.4790 trillion	Total Assets KRW 8.9680 trillion	Sales KRW 4.2109 trillion	Net Profit KRW 467.6 billion

(Based on separate financial statements)

Organizational Chart



No. of Employees

(As of June 2017)

Executives	Managers	Staff employees	Total
4	657	1,652	2,313

Korea East-West Power History

As a power generation company (Joseon Electric Corporation) and two power distribution companies (Gyeongseong Power and Namseon Power) merged together in April 1961, the entire power generation and distribution processes were vertically integrated and operated by Korea Electric Power Corporation (KEPCO). With the restructuring of the electric power industry in 2001, the power generation division was spun off from KEPCO into six power companies. As one of the six companies, Korea East-West Power (EWP) is now located in Ulsan Innovation City.

1898.01 Founded Hanseong Electricity as Korea's first power company

→ **1961.07** Gyeongseong Power + Joseon Electric Corporation + Namseon Power ↓ Founded Korea Electric Power Co., Ltd.

→ **1982.01** Founded Korea Electric Power Corporation as a public corporation

→ **2001.04** Founded Korea East-West Power

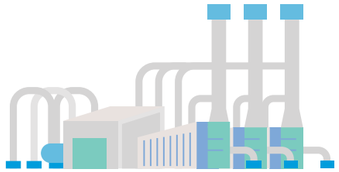
→ **2014.06** Relocated the Head Office to Ulsan Innovation City

Sustainability Award History

	Economic	Environmental	Social
2007	Won the award at BSC Hall of Fame	CDM business for photovoltaic power registered at UN	Won the Presidential Award at the 32nd National Quality Competition
2008	Won the grand prize at the 2007 Korea Technological Innovation Awards	Acquired eco-friendly business and ISO 14001 certification	Won the grand prize at the Labor-Management Culture Awards
2009	Won the first prize for the longest breakdown-free operations	CDM business for hydropower registered at UN	Won the grand prize at the 2008 Korea Technology Innovation Management Awards
2010	Won the grand prize at the 8th Digital Innovation Award (3 consecutive years)	Won the grand prize at the 2009 Korea Green Awards	Won the 8th Korea Safety Grand Prize
2011	Won the Longest Run Award (Hosted by EUCG)	Won the Grand Prize at the 2nd Green Technology Awards	Won the Outstanding Business Award hosted by the Ministry of Patriots and Veterans Affairs
2012	The Unit of the Year Award (Hosted by Guam Power Authority)	Won the grand prize of UN Global Compact for eco-friendliness	Won the Minister of Gender Equality & Family Award
2013	The EUCG Best Performer Award	Certified as an outstanding business for the response to climate change	Won the Prime Minister Award for family-friendly policies
2014	Won the 2013 Transparent Management Grand Prize	Won the grand prize at the Korea New Growth Management Awards for green technologies	Won the Minister Award for the cultivation of local technical talents
2015	Won the Korea Economic Leader Grand Prize for win-win cooperation	Won the special award at the Carbon Disclosure Project (2 consecutive years)	Won the Presidential Award for the cultivation of SMEs
2016	Certified as an outstanding organization for quality competitiveness (7 consecutive years)	Ranked the 1st in Climate Change Competitiveness Index for 6 years, and won the special award at CDP for 3 consecutive years	Acquired Grade S at Safe Korea Training (4 consecutive years)

Domestic Business

EWP accounts for 9.5% of the total domestic power generation, and the total facility capacity of its five power plants is 11,170MW. EWP's electric power facilities include coal-fired power plants (bituminous coal and anthracite) accounting for 62.1%, combined-cycle power plants (LNG) constituting 26.6%, heavy fuel oil power plants amounting to 10.7%, and new and renewable energy power plants occupying 0.6%.



Dangjin Coal-fired Power Complex

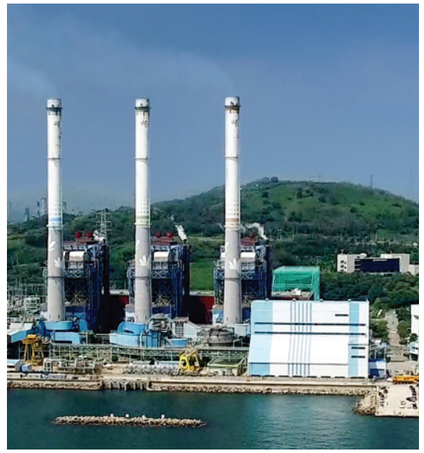
Dangjin Coal-fired Power Complex various state-of-the-art environmental pollution prevention facilities and environmental monitoring systems. It is operating 500MW supercritical power plant units 1 to 4, ultra-supercritical power plant units 5 to 8, and high-efficiency ultra-supercritical power plant units 9 and 10, which correspond to a nuclear power plant (1,020MW) for the first time in Korea.

Facility Capacity | Including 15.6MW of new and renewable energy

6,055.6MW

No. of power plant units

10



Ulsan Oil-fired & C.C Power Complex

Ulsan Oil-fired & C.C Power Complex was constructed to respond to a high demand for electric power during a period of the economic growth in Korea. It supplies electric power stably to Ulsan Petrochemical Industry Complex and generates power in two ways, steam power and combined-cycle power, and operates DSS (Daily Start-up and Stop) or WSS (Weekly Start-up and Stop) for the stability of the power systems. In addition, it operates Ulsan Combined Heat and Power Plant Unit 4 using clean fuel (LNG).

Facility Capacity | 3.3MW of new and renewable energy

3,275.2MW

No. of power plant units

7

Honam Coal-fired Power Plant

Although Honam Coal-fired Power Plant had started its first operation as a heavy-oil power plant in 1973, it was converted into a coal-fired power plant in 1985 based on the government's fuel diversification policy. Since two service-life extension projects were completed in 1999 and 2010, it has been contributing to Korea's economic growth, supplying electric power to Yeosu National Industrial Complex and neighboring areas.

Facility Capacity | Including 0.1MW of new and renewable energy

500.1MW

No. of power plant units

2

Donghae Coal-fired Power Plant

Donghae Coal-fired Power Plant can desulfurize without a desulfurization facility and generate less nitrogen oxide through low-temperature combustion. In addition to its own leading-edge anthracite CFBC technology, it has differentiated combustion technologies, such as co-firing with bituminous coal and RDF co-firing which can respond to the changes of the fuel market. It also operates Korea's largest woody biomass power plant that produces electricity using domestically-generated waste wood.

Facility Capacity | Including 1MW of new and renewable energy

431MW

No. of power plant units | Including a biomass power plant

3

Ilsan Combined Heat & Power Plant

Ilsan Combined Heat & Power Plant produces electricity using heat recovery steam generators and provides local residents with residual heat for household heating. It is supplying electric power to as many as 300,000 households and residual heat to about 160,000 households for home heating. As the plant uses LNG which is a clean fuel, it barely generates air pollutants, such as sulfur oxide or dust. In addition, the plant has installed low NOx burners to minimize the nitrogen oxide generation, and operated a fuel cell power generation facility (8MW).

Facility Capacity | Including 8MW of new and renewable energy

908MW

No. of power plant units

2

Domestic New Industry

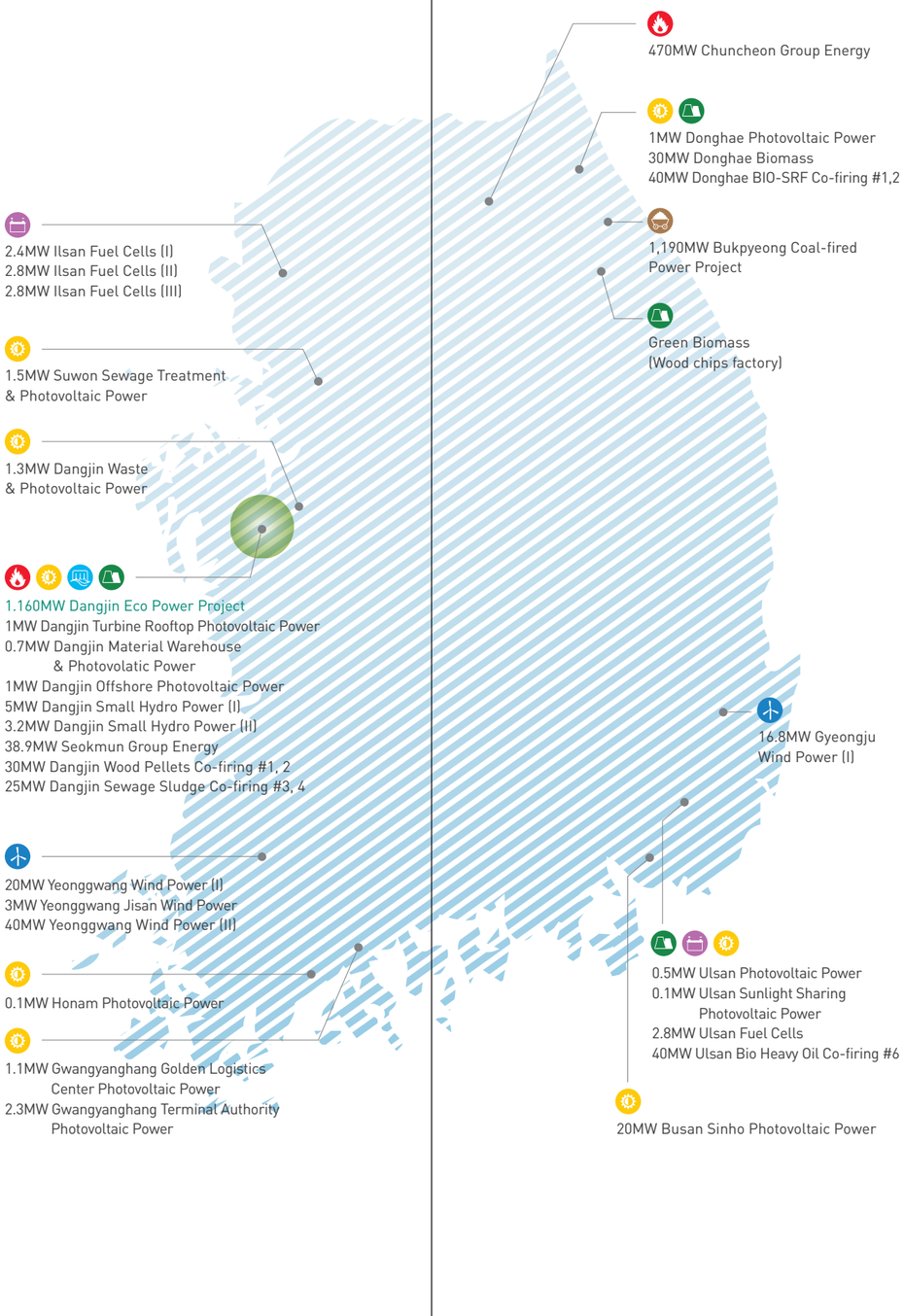
EWP has been involved in new energy projects in cooperation with private companies in order to stably supply electric power and contribute to sustainable growth in the future. Also, EWP is constantly expanding the capacity of new and renewable energy. EWP will increase the percentage of this capacity to 20% by 2030 and produce a total of 5,081MW of new and renewable energy.

Operating capacity		Construction capacity		Total capacity
1,993.3 MW	+	1,160 MW	=	3,153.3 MW

* Wood chips factory : 100,000tons/year

Types

- Coal-fired
- Wind power
- LNG
- Biomass power
- Fuel cell
- hydropower
- Solar energy
- In construction
- In operation



Project (SPC)	Dangjin Eco Power Project · Dangjin Eco Power Co.
Capacity	580MW X 2
Share Ratio	34.0%
Date of Completion	2022. 03
Business Partner	SK Gas, Korea Development Bank

Project (SPC)	Seokmun Group Energy Project · Seokmun Energy Co.
Capacity	38.9MW+52.2Gal/h (Bio-SRF)
Share Ratio	29.9%
Date of Completion	2017. 01
Business Partner	Kukin, FI

Project (SPC)	Yeonggwang Wind Power (II) · Yeonggwang Baeksu Wind Power Co.
Capacity	40MW
Share Ratio	15.0%
Date of Completion	2015. 05. 28
Business Partner	Unison Co., Kumho Petrochemical Co., Daehan Green Energy Co.

Project (SPC)	Yeonggwang Wind Power (I) · Honam Wind Power Co.
Capacity	20MW
Share Ratio	29.0%
Date of Completion	2014. 03. 01
Business Partner	DMS Co., FI

Project (SPC)	Chuncheon Group Energy Project · Chuncheon Energy Co.
Capacity	470MW+129.9Gal/h (LNG)
Share Ratio	29.9%
Date of Completion	2017. 04
Business Partner	POSCO E&C, Hanjin Heavy Industries & Construction, FI

Project (SPC)	Constructing and operating Green Biomass Co.
Capacity	100,000ton/year
Share Ratio	14.0%
Date of Completion	2013. 04. 18
Business Partner	Kyungdong Co., Bong Hwang Industrial Co.

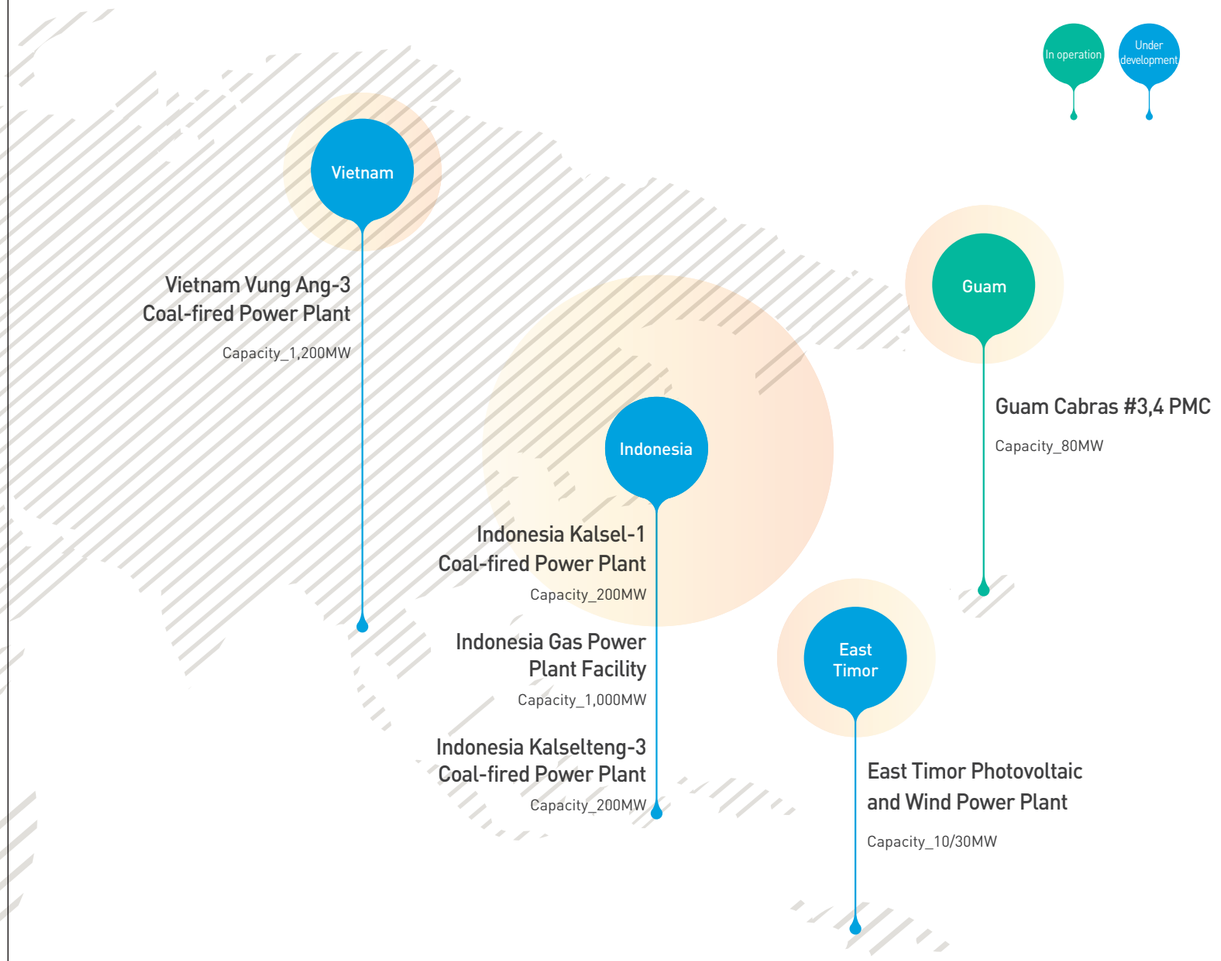
Project (SPC)	Gyeongju Wind Power (I) · Geyongju Wind Power Co.
Capacity	16.8MW
Share Ratio	70.0%
Date of Completion	2012. 10. 28
Business Partner	Dongkook S&C Co., Kolong Global Co.

Project (SPC)	Bukpyeong Thermal Power Project · GS Donghae Electric Power Co.
Capacity	595MW X 2
Share Ratio	34.0%
Date of Completion	2017. 05
Business Partner	GS E&R, Samtan Co.

Project (SPC)	Renault Samsung Motors Photovoltaic Power · Busan Sinho Photovoltaic Power Co.
Capacity	20MW
Share Ratio	25.0%
Date of Completion	2012. 12. 21
Business Partner	KC Cottrell Co., FI

Overseas Business

EWP is operating four power plants (876MW) in Jamaica and the U.S. in order to ensure a stable profit structure and power for future growth. In addition, EWP is carrying out various projects including coal-fired power plants, gas power plant, and new and renewable energy in Indonesia, Vietnam, Jamaica, etc.



Type	Projects		Facility Capacity (MW)	Business Type
In operation	Jamaica Public Service (JPS)		644	Investment shares(40%)
	EWP RC, U.S.	Biomass Power Plant	58	Investment shares(100%)
		Natural Gas Diesel Power Plant	94	Investment shares(100%)
	Guam Cabras #3,4 PMC		80	PMC
Under development	Indonesia Kalsel-1 Coal-fired Power Plant		200	BOOT
	Vietnam Vung Ang-3 Coal-fired Power Plant		1,200	BOT
	Indonesia Gas Power Plant		1,000	Undecided
	Jamaica Combined Cycle Power Plant		190	investment shares
	East Timor Photovoltaic and Wind Power Plant		10/30	BOO
	Indonesia Kalselteng-3 Coal-fired Power Plant		200	BOOT
	South Africa Polokwane Photovoltaic Project		90	BOT

Jamaica Public Service (JPS)

- **Facility capacity:**
  Generation 71% (644.52MW)
  Transmission and distribution 100%
- **Project period:** 2011.07 ~ present

EWP RC, U.S.

- **Facility capacity:**
  Biomass (58.2MW), Natural gas (94MW)
- **Project period:**
  Biomass (2010.09~present)
  Natural gas (2011.05~present)

Guam Cabras #3, 4 PMC

- **Facility capacity:**
  80MW (40MW x 2)
- **Project period:** 2010.07~2016.12

EWP Value Creation Process

EWP establishes mid and long-term management strategies, considering the trends of the energy industry such as a response to climate changes and supply of new and renewable energy, along with economic, social, and environmental context. EWP is realizing balanced development and sustainable growth of local communities through its entire business processes, including R&D, power plant construction, fuel procurement, power generation, and facility management.

FOR VALUE CREATION

VISION - 2030 Most Valuable Power Company

MISSION - We Make Energy for Happiness

BUSINESS MODEL

step.01 R&D and Strategy Planning
Development of new industry and power resources, and establishment of power supply plan

step.02 Construction
Constructing thermal power plants and new and renewable energy power plants

step.03 Fuel Procurement
Procuring fuels such as coal, oil, and wood chips

step.04 Power Generation
Operating facilities in environment-friendly, stable and economical way

step.05 Facility Management
Predicting and preventing failures and improving outdated facilities

EWP Strategic Directions

- Enhancement of competitiveness of the power generation business
- Creation of future growth business
- Enhancement of core competencies
- Realization of sustainability management

Values Created

01. Stable supply of electric power
- Forced outage rate: 0.062%
- Diversified the sources of fuel supply in 7 countries
- An increase in the rates of operating profits 15.8 %

02. Enhancement of future growth engines
- Net profit of Jamaica Public Service: 24 billion won
- Capacity of new and renewable energy: 342MW
- Annual sales of wind power plants 24.4 billion won

03. Operation of eco-friendly power plants
- Accumulated GHG reduction according to the emission trading scheme: 2.7 million tons
- Ranked the 1st in climate competitiveness index in the power generation sector
- Air emissions reduction compared to the previous year 13 %

04. Happy and safe workplace
- No. of employees who have utilized flextime: 812
- No. of employees who have participated in education and training: 38,586
- Total average score of safety culture maturity 4.03 points

05. Win-win growth with business partners
- Established a win-win consultative group with marine equipment manufacturers
- Raised 17.2 billion won for R&D funds
- Small and medium-sized businesses' export 1,235.3 billion won

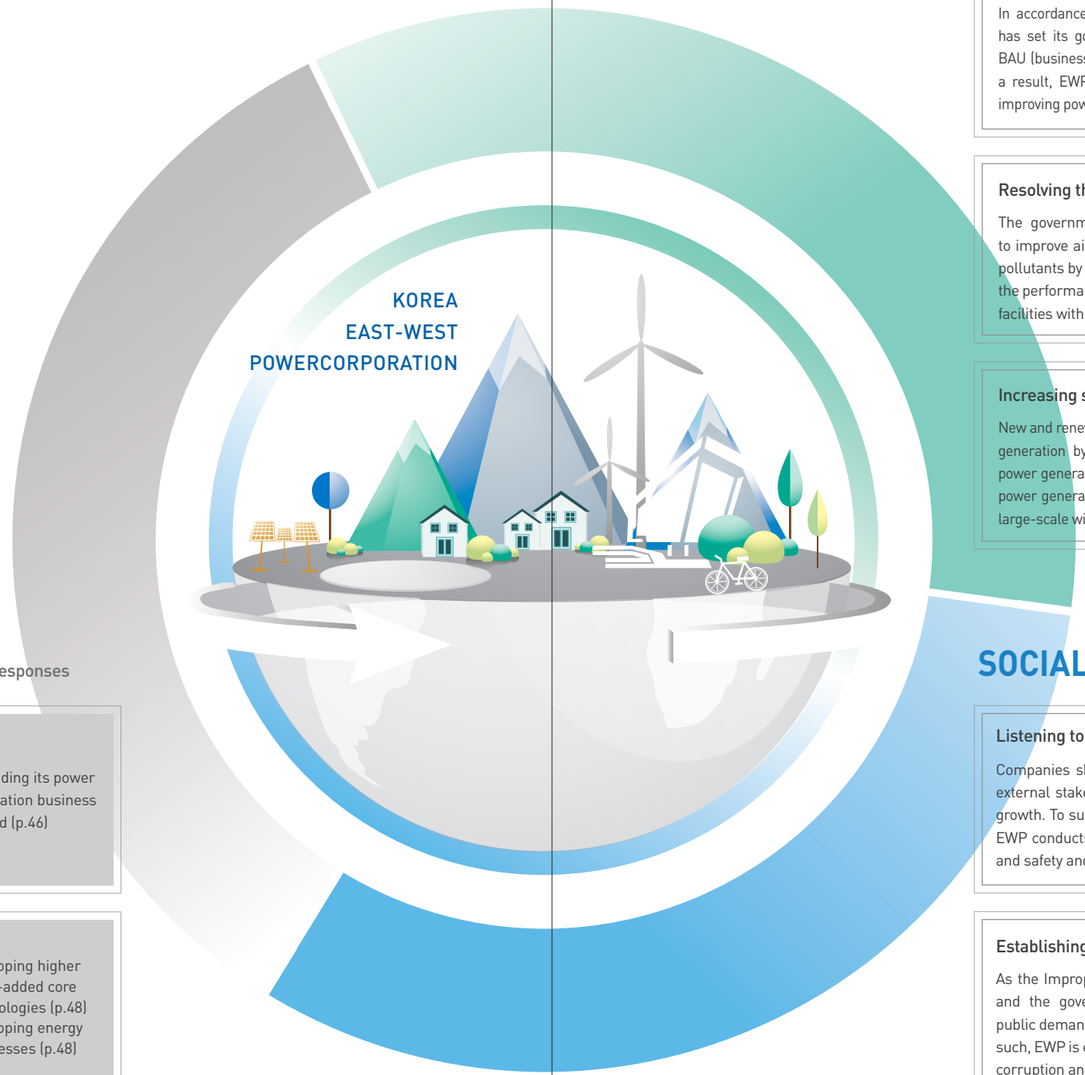
06. Happy growth with local communities
- Energy welfare support for the underprivileged: 1,613 households
- Support for recovery from Typhoon Chaba: 265 million won
- Created 14,133 jobs
- Sustainability Index AAA Level

MEGA TRENDS

- A response to climate changes according to the new climate regime
- An increase in the supply of low-carbon energy sources
- Consumer-centered development technology
- Cutting-edge ICT-based Industry 4.0

Environment for EWP's Sustainability Management

For the sustainable growth of the electric power industry, EWP is responding aggressively to the changes in the domestic and foreign energy markets and in the sustainability management trends in the economic, social, and environmental aspects. EWP is seeking measures to respond to the rapidly changing business environment, such as a slow increase in power demand and cutting-edge ICT development, and trying to resolve national issues such as climate changes and fine dust by operating eco-friendly power plants. Lastly, EWP will carry out its corporate social responsibility to the fullest by seeking a plan for mutual growth with local communities and resolving employee grievances.



ENVIRONMENTAL

EWP's Responses

Entering into the new climate regime

In accordance with the new climate regime, the Korean government has set its goal to decrease CO_2 emission by 37% compared to the BAU (business as usual) in 2030 and by 19.4% in power generation. As a result, EWP is expanding biomass co-firing power generation and improving power generation efficiency.

→ · Expanding co-firing power generation and improving power generation efficiency (p.53)

Resolving the national issues relating to fine dust

The government-energy industry consultative group was formed to improve air quality. In 2015, the advisory group agreed to reduce pollutants by 50% until 2030. EWP will achieve this goal by improving the performance of environmental facilities and replacing preexisting facilities with high-efficient facilities stage by stage.

→ · Improving environmental protection facilities (p.55)
· Developing technology to rduce fine dust (p.47, 62)

Increasing supplies for new and renewable energy

New and renewable energy is expected to reach 29% of the global power generation by 2040. In addition, the Korean government demanded power generation companies to supply a certain percentage of the total power generation as new and renewable energy. EWP is carrying out a large-scale wind power project and constructing biomass power plants.

→ · Carrying out a large-scale wind power project (p.44)
· Constructing biomass power plants (p.44)

ECONOMIC

EWP's Responses

The global demand for energy led by non-OECD countries

According to EIA, U.S., the energy demand of OECD member countries will increase by only 18% by 2040, whereas that of non-OECD countries or developing countries will quickly grow by 71%. As the energy demand of developing countries is expected to skyrocket, EWP is expanding its power generation business abroad.

→ · Expanding its power generation business abroad (p.46)

Increasing market share of Korean private companies

The electric power generating capacity of public corporations is expected to increase by 9% by 2025 compared to 2014, whereas that of Korean private companies is expected to rise by 111%. Accordingly, EWP will develop core technologies and new energy businesses for sustainable growth.

→ · Developing higher value-added core technologies (p.48)
· Developing energy businesses (p.48)

Entering ICT-based Power Generation Industry 4.0

Industry 4.0, where the industries and cutting-edge ICT such as IoT, big data, and AI converge, is just around the corner. EWP is constructing smart power plants by integrating its operational information and expertise and experience in power generation, including wearables, drones, and the VR failure simulation system, into ICT.

→ · Working on Industry 4.0-based solution business (p.49, 50)

SOCIAL

EWP's Responses

Listening to stakeholders' opinions

Companies should go in the right direction based on internal and external stakeholders' opinions for risk prevention and sustainable growth. To sustain the safety of local residents and on-site workers, EWP conducts various activities for coexistence with local residents and safety and health management.

→ · Activities for coexistence with local residents (p.58, 59)
· Safety and health management (p.69)

Establishing a clean and transparent corporate culture

As the Improper Solicitation and Graft Act has taken effect in 2016 and the government has established anti-corruption policy, the public demand a cleaner and more transparent corporate culture. As such, EWP is establishing a clean corporate culture by providing anti-corruption and human rights education and setting ethical norms.

→ · Strengthening the ethical management promotion system and relevant activities (p.25-27)

Contributing to stimulating the regional economy

The companies are expected to resolve the current economic issues of Korea, such as the huge gap between leading companies and small or medium-sized companies and high youth unemployment rates. EWP is seeking and carrying out plans to stimulate the regional economy, by pursuing fair employment and mutual growth with business partners.

→ · Establishing Mutual Growth Model 4.0 (p.77, 78)
· Creating quality jobs (p.83, 84)

PREPARING SUSTAINABILITY MANAGEMENT

Mid & Long-term Management Strategies

Reorganization of strategies

The environment of the power generation industry is rapidly changing with the regulations on operation and construction of power plants due to a sudden increase in fine dust, the advent of the Fourth Industrial Revolution, including big data and IoT. Due to such changes, EWP has reorganized its mid and long-term management strategies based on new strategies and ideas differentiated from preexisting strategies. EWP has collected a variety of opinions through external experts, CEO-led discussion, town meetings, and an employee survey, and established new management goals, by reflecting its future goals and the values of innovation.

Systematic Performance Management

In order to achieve mid and long-term strategies, EWP has established and managed strategic tasks by each position.

Strategy and performance management by position

CEO	Director/Head	Departmental Head	Team Members
· Establishing and sharing management policies · Meeting by rank · Town meeting · Management strategy meeting	· Business planning by group based on strategic direction · Distributing and managing performance goals to groups · Weekly meeting	· Managing a work plan · Managing and distributing performance goals to individuals · Internal discussion	· Establishing and carrying out detailed plans · Inspecting, managing and reporting the implementation plans

Mid & Long-term Strategy and Performance Management

Core Values

Cooperation and Integrity

Creation

2030 Most Valuable Power Company

Mission

WE MAKE ENERGY FOR HAPPINESS

Vision

Respect for Human Beings

Passion and Challenge

Goals	Strategic Directions & Strategic Tasks	KPIs	Efforts	Performance in 2016	Result in 2016	Goals of 2030
Solution provider for power generation technology	Enhancing competitiveness of the power generation business · Enhancement of power generation efficiency · Development of power generation technology solutions · Enhancement of competitiveness of fuel procurement	Unplanned loss rate	· Improving facilities · Preventing breakdown and realizing predictive maintenance	· Forced outage rate 0.062% (the lowest since its foundation)	0.163%	0.1%
		Solution sales	· Establishing a master plan · Holding a technology seminar for customers and partners	· Formed an alliance (4 companies including GE)	1,360 million won	200 billion won (accumulated)
		Fuel cost reduction rate	· Inspecting the bidding process and introducing a new bid valuation system	· Reduced the purchasing costs of bituminous coal by KRW 12.7 billion	9.8%	10%
Facility capacity 22,800MW (New and renewable energy share 20%)	Creating future growth business · Expansion of new & renewable energy business · Leadership in the development of new energy business · Expansion of new business at home and abroad	RPS*	· Carrying out a large-scale wind farm complex construction project (East) 600MW, (West) 140MW	· Started the 2nd stage of construction of Gyeongju Wind Farm and Yeonggwang Wind Farm	2.9%	10%
		Progress on new energy business	· Expanding a new energy business model customized for each region (Dangjin, Ulsan)	· Established infrastructure of Ulsan "e-Clean City"	Demonstration construction	Expansion of new business
		Capacity in Korea and foreign countries	· Carrying out Jamaica's long-cherished project (more than 10 years of constructing gas power plants)	· Obtained the business right for 190MW integrated gasification combined cycle	11,864MW	22,800MW
Operating profit KRW 1 trillion	Enhancing core competencies · Securing of future technology competitiveness · Cultivation of global core talents · Stable creation of profits	Technology independence	· Conducting research projects relating to new energy business, IT convergence, and clean energy	· Developed salt water battery-based ESS (for the first time in the world)	87 points	100 points
		Core talent cultivation rate	· Employing more skilled professionals (lawyers, accountants, big data experts, etc.)	· Employed six experienced professionals and three open-position employees	3.2%	4.5%
		Operating profits	· Stable operation of power plants with efficiency · Stable profits in Korea and abroad	· Reduced facility's failure hours by 33% · 24 billion won of net profits from JPS**	672.1 billion won	1 trillion won
Corporate integrity level 1	Realizing sustainability management · Upgrade of security & safety management · Enhancement of corporate integrity · Operation of eco-friendly power plants	Maturity of safety culture	· Implementing the safety grade system for overhauls and operating the support system by safety grade	· Reduced safety accidents (2015: 12 → 2016: 3)	Stage 4	Stage 5
		Integrity	· Adapting the Improper Solicitation and Graft Act · Diversifying ethical activities	· Minimizing controversies over the Act · Expanding integrity culture	Grade 3	Grade 1
		Greenhouse gas reduction rate	· Establishing a 2030 companywide roadmap for GHG reduction	· Overachieved the government goal for the 1st phase of the emission trading scheme (2.7 million tons)	2%	20%

* Renewable Portfolio Standard ** Jamaica Public Service

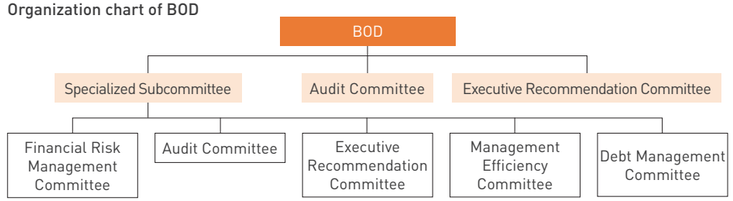
Governance

The Board of Directors plays an important role in effective sustainability management of EWP. Through a regular BOD meeting, EWP is looking for ways for mutual growth with local communities and considering environmental and social issues as well as economic development of EWP.

Composition of the Board of Directors

Non-executive directors account for over half of the Board of Directors of EWP for its business transparency. The Board of Directors (BOD) consists of 4 inside directors and 5 outside directors. To guarantee the independence of the BOD, the senior non-executive director (outside) presides over the BOD meetings as a chairperson.

Organization chart of BOD



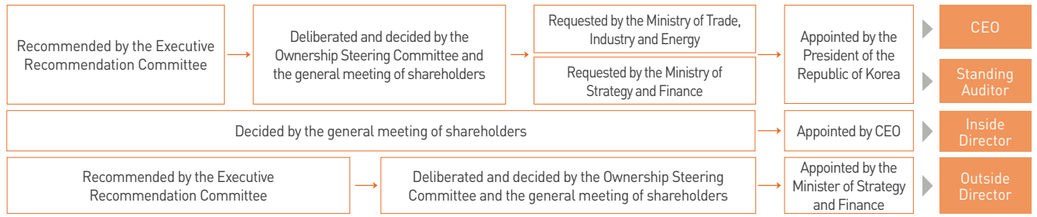
The board of directors

Name	Affiliation and position		Career	Term in office
Vacant	Directors	CEO		
Kim Oh-young		Executive Auditor	· (Former) Chairperson of Gyeongsangnam-do Provincial Council · (Former) Chair professor at Kyungnam University	2016.3.28-2018.3.27
Park Hee-sung		Acting CEO	· (Former) Director of EWP Cooperate Partnership & Procurement Division · (Former) Director of EWP Audit & Inspection Planning Team Head of Strategy & Management Group	2016.5.4-2018.5.3
Kook Jung-yang		Head of Engineering & Safety Group	· (Former) Head of EWP Business Developing Group · (Former) Head of EWP Dangjin Coal-fired Power Plant	2016.5.4-2018.5.3
Kim Kyoung-min	Non-executive Directors		· (Current) Professor of Department of Political Science and International Studies at Hanyang University · (Former) Policy advisor of the Ministry of Trade, Industry & Energy	2014.2.14-2017.3.29
Lee Jong-hyun			· (Former) Member of Chungcheongnam-do Provincial Council · (Former) Vice-chairman of Korean Peasants Provincial League	2015.3.18-2017.3.17
Yi Jae-guk			· (Former) Non-executive Director of KOTRA · (Former) Head of Overseas Business at Booyoung Housing	2016.9.27-2018.9.26
Yi Sang-gi			· (Current) Professor at Industry-University Cooperation Foundation of Kyonggi University · (Former) Director of KEPCO at Seoul Office	2016.9.27-2018.9.26
Mun Ho			· (Former) Full-time Vice-chairman of Korea Smart Grid Association · (Former) Vice-president of KEPCO	2017.1.11-2019.1.10

Director Appointment Procedure

The CEO is appointed with the final approval of the President of the Republic of Korea. Inside and outside directors except CEO are appointed by the CEO and the Minister of Strategy and Finance, respectively.

Director appointment procedure



BOD Operations

Holding a BOD meeting

Through a BOD meeting, the Board of Directors can decide major issues such as management goals, operational plans, and mid and long-term financial management plans, when over half of the registered directors show their support. However, directors who have a stake in an agenda of a BOD meeting cannot exercise their vote and are not included in the number of registered directors. A BOD meeting is held when the chairperson of the BOD or over one-third of the registered directors demand.

BOD meetings in 2016

Number of BOD meeting	Resolved agenda	Agenda resolved after revision	Proposals	BOD meeting attendance
13 times	47 cases	1 case	6 cases	88.8%

Agendas relating to sustainability issues

In 2016, the BOD decided on major sustainability management issues as follows: the enactment of the human rights management guidelines, equity investment for the project on the school photovoltaic power station, Yeonggwang wind power construction project and the new gasification combined cycle power plants in Jamaica.

Deducted **46** sustainability management issues

Selection of Management Innovation Tasks

For management innovation, CEO of EWP took an active part in selecting management innovation tasks through a discussion with employees. In addition, he deducted 46 sustainability management issues such as future business and urgent/major tasks through an executive discussion and a management strategy meeting and set up the direction of EWP innovation and the final tasks for "Business Innovation, Management Innovation, and Service Innovation."

CEO Letter and Management Messages **57 times**

Communication with Stakeholders

EWP's CEO and executives are doing its best for on-site management by communicating with stakeholders via a variety of communication channels. Through online and face-to-face communication, they deducted economic, environmental and social issues of stakeholders.

On-site management communication channels and performance

Type	Channel	Purpose	Performance
Online communication	CEO letter and management messages	Sharing management issues and motivating employees	57 times (increased by 27% year on year)
	SNS	Collecting a variety of opinions through open communication	Regular communication
	Messenger	Sharing information rapidly and cooperating with others through communication	Regular communication
Face-to-face communication	CEO's on-site management activities	Encouraging employees and emphasizing safety	31 times
	General discussion	Discussing with employees about issues on new technology, new business, etc.	3 times
	Discussion by corporate hierarchy	Resolving management issues and seeking future development plans	4 times

Ethical Management

EWP has achieved Excellent Level or higher in the evaluation of integrity and anti-corruption policies by the Anti-Corruption and Civil Rights Commission for five consecutive years. In 2016, it conducted emergency measures for improving integrity to prevent corruption and spread an ethical culture.

Ethical Management System

To achieve the goal of ethical management, EWP has established mid and long-term strategies and three promotion tasks as below.

Ethical Management System

Goal	To become an ethical corporation, growing and earning respect out of clean ethics		
Mid & long-term strategies	Reinforcement of prevention and precontrol of corruption	Internalization of a sense of ethics by communication and participation	Establishment of a foundation for mutual growth
Promotion tasks	Complying with the Improper Solicitation and Graft Act	Diversification of participatory ethical activities	Spread of an ethical culture
	· Improvement of systems relating to the Improper Solicitation and Graft Act · Removal of causes of corruption in advance	· Implementation of participatory ethical activities · Development of game-type education on ethics	· Consulting on integrity for coexistence · Reinforcement of cooperation on ethics between public and private sectors

Execution of Ethical Management

Enhancement of ethical norms

Since the Improper Solicitation and Graft Act took effect in September 2016, EWP strengthened its ethical norms, such as the employee code of conduct and the guidelines for participatory integrity and ethical activities, to improve a sense of ethics of all employees. In addition, EWP made the customer service and complaint-handling manual for the prevention and management of risks on ethics.

Establishment and revision of ethical norms

Ethical norms	Establishment and revision
Code of conduct for employees	Reinforcement of the regulations on remuneration for external lectures and promotional gifts (a limitation in use)
Guidelines for activities on integrity and ethics	Restriction on incentives provided to those who have violated the code of conduct
Guidelines on request for disciplinary action	Reinforcement of the standard amount of disciplinary action resulting from the receipt of financial or material benefits and treats

Enhancement of ethical management organizations

Appointment of honorary inspectors and the integrity inspection group

To realize ethical management, EWP is operating the High-ranking Integrity & Ethics Committee, Ethics & Compliance Team and Integrity Inspection Team, and emphasizing the roles of the ethical management leaders, ethical practice leaders, and compliance officers of such organizations. In 2016, it newly appointed honorary inspectors and the integrity inspection group who were involved in an internal audit, consultation and anti-corruption monitoring.

Ethical management organizations

Leaders	Organizations	Outside consultants
· High-ranking Integrity & Ethics Committee · Ethics & Compliance Team · Integrity Inspection Team	· Ethical practice leaders · Compliance officers · Personnel in charge of the code of conduct	· Honorary inspectors · Integrity inspection group · Integrity ombudsman

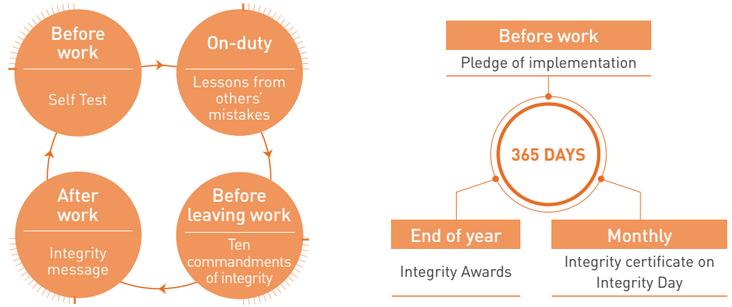
Implementation of Ethical Management

Complying with the Improper Solicitation and Graft Act

Operation of 24-hours ethical monitoring system

EWP provided education on the Improper Solicitation and Graft Act education, and invited experts of the Act to help all employees understand the Act. Its in-house integrity instructors provided ethical management education for employees. In addition, EWP conducted simulation training through its online report system "Red Whistle," and its stakeholders wrote a pledge of compliance with the Act. Lastly, EWP is operating the 24-hours ethical monitoring system to set up a culture complying with the Act.

A 24-hours Ethical Monitoring System



Spread of an ethical culture

EWP, designated as an integrity consulting mentor organization of EBS by the Anti-Corruption and Civil Rights Commission, provides integrity consulting to enhance the importance and awareness of an integrity culture. A total of four integrity consulting sessions were provided, and EWP improved the integrity culture and systems of mentee organizations by sharing its best practices on integrity. Furthermore, EWP appointed employees, who have been applied with the wage-peak system, as integrity consultants for the first time among public organizations. The integrity consultants are providing integrity counseling and education at each office. In addition, EWP is contributing to spreading an ethical culture in local communities by concluding an agreement for integrity work and holding the Integrity Festival with private organizations.

Diversification of participatory ethical activities

740 employees participated in 19 sessions on ethics

EWP provided various education activities on ethics such as a board game, quiz contest and integrity campaign, under the theme of the Improper Solicitation and Graft Act and anti-corruption. In addition, EWP introduced Clean Mileage* and attracted the active participation of all employees. In 2016, 740 employees participated in a total of 19 sessions on ethics. In March 2017, EWP held the Anti-Corruption and Civil Rights Commission Workshop and shared its self-developed ethics education gamification.

* Clean Mileage: The mileage accumulation and incentive system of in-house integrity and ethical activities to attract employees' participation and spread an ethical culture

▲ Participatory activities about ethics

Monitoring and Feedback on Ethical Management

Monitoring of external evaluation

Achieved Excellent Level or higher in the evaluation of integrity and anti-corruption policies by the Anti-Corruption and Civil Rights Commission for **five consecutive years**

EWP has achieved an Excellent Level or higher in the evaluation of anti-corruption policies by the Anti-Corruption and Civil Rights Commission for five consecutive years. Although EWP had received the highest level from 2012 to 2015, it obtained Excellent Level due to four issues relating to budget execution and work instruction. EWP is making efforts to retake Level 1 in the evaluation of integrity and anti-corruption policies in 2017, by analyzing the causes of the downgrade and preparing emergency measures for improving integrity.

Emergency measures for improving integrity

Strategies	Details
Establishing a trust-based corporate culture listening to stakeholders' voices	· Operating Integrity T/F for internal integrity (Establishment of HDCA platform*) and collecting opinions via various channels such as VOC**, anonymous bulletin board, etc.
Realizing a clean organization by promoting internal report	· Utilizing Red Whistle (anonymous report by business partners) · Providing incentives for whistleblowers, etc.
Improving integrity by strengthening the integrity systems	· Introducing One Strike Out to punish corrupt employees · Strengthening the management of the indices of the internal evaluation, "Ethical Management Efforts"
Improving a corporate culture through changes	· Declaring the five promises of executives · Enhancing the communication system between the directors of divisions and other employees

* HDCA platform: Hearing (listening carefully), Do (establishing measure), Check (checking on-site responses), and Action (improving a corporate culture) ** VOC (Voice of Customer): Management of customer feedback

Results of self-evaluation of integrity Unit: Points

Monitoring of internal evaluation

In an EMDEX* diagnosis, EWP earned 93.3 points and maintained Prestige Maintenance Level**. As the points slightly declined, EWP is monitoring and improving its integrity through a self-evaluation and a corruption risk diagnosis. As a result of precontrolling the corruption factors, it received 9.77 points in a self-evaluation of integrity which increased by 0.08 points year on year for external integrity, and 9.97 points which increased by 0.06 point for the integrity of high-ranking employees.

* EMDEX (Ethic Management InDEX): The ethical diagnosis indices developed by EWP on the basis of global standards such as ISO 26000 and GRI sustainability reporting guidelines. ** Prestige Maintenance Level: The highest level among the five ethical management levels the level realizing responsible ethical management

Human Rights Management

EWP proclaimed the Charter of Human Rights Management to protect the human rights of all stakeholders. The Charter of Human Rights Management states nine basic principles including human-centered management activities, protection of human rights of the people, and prohibition of discrimination against all stakeholders. In September 2016, EWP installed the Employee Rights Protection Committee with the Labor Union so as to respect human rights and protect employee rights. Furthermore, it announced a labor-management joint declaration and created the employee rights protection bulletin board for anonymous online counseling and reporting.

▲ Proclamation ceremony of the Charter of Human Rights Management

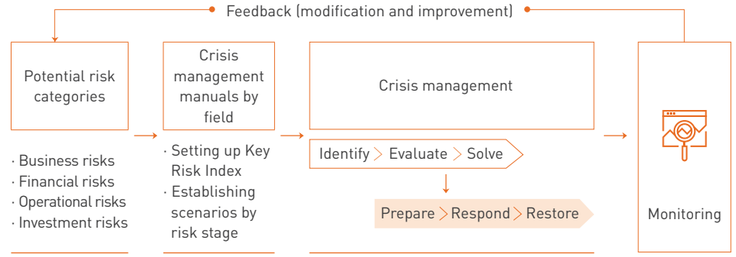
Risk Management

Risk management for stable business operation becomes more and more important with the environmental changes in the domestic and overseas energy markets such as the slow growth of the domestic electric power market, the increasing market share of private companies and the decarbonization of the global energy market. EWP is operating its companywide risk management system to prevent risk and responding to complex disasters through the Cyber & Disaster Safety Center.

Operation of the Companywide Risk Management System

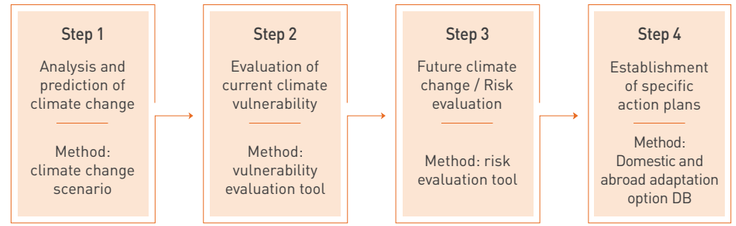
To manage the practical risk of power generation businesses, EWP has improved risk factors, considering the vulnerabilities of the power generation industry and social needs. It added companywide risk and investment risk categories to preexisting categories (financial risk and operational risk), made crisis management manuals by field, and established scenarios by risk stage. Risk factors are being consistently monitored and managed.

Risk management process



Risk Management for Climate Change

In order to respond to the new climate regime in advance, EWP implemented the countermeasure manual for climate change. EWP analyzed the risks from climate change and diagnosed the vulnerability of each operation with the help of experts.



Cyber & Disaster Safety Center

Won the Grand Prize at the 1st Public Organizations Online Security Awards
(The Minister's Award by the Ministry of Trade, Industry & Energy)

For the first time among power generation companies, EWP has established and operated the Cyber & Disaster Safety Center for a quick response to and prevention of various crises, including cyber accidents, disasters and safety accidents. The center consists of the Integrated Disaster Prevention Section responsible for onsite safety and disasters, and the Cyber Security Section responsible for cyber and information security.

Stakeholder Engagement

EWP is communicating with stakeholders associated with its value chain encompassing business development to power consumption.

Stakeholder Classification and Communication Channels

EWP classifies stakeholders into value impact, value production, value cooperation and value consumption, based on the energy production-centered value chain, and collects opinions from stakeholders via various communication channels.

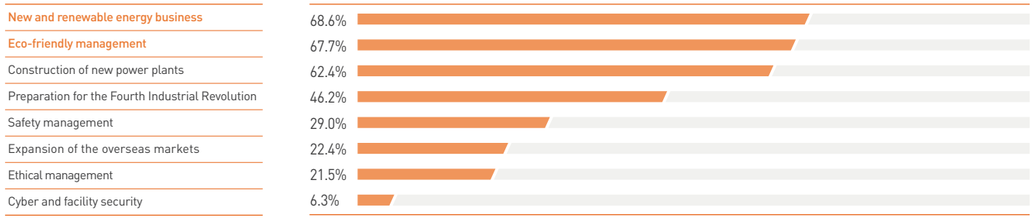
Stakeholder Classification and Communication Channels

Classification	Definition	Major players	Areas of interest	Communication channels
Value impact	Affecting value creation	Government, local governments, residents, environmental organizations, press, etc.	· Securing competitiveness of the power industry · Local development and environmental protection · Interest in current issues, and competition & cooperation	· Parliamentary inspection and communication portal · Local council · Power generation company council, etc.
Value production	Employees participating in value creation	Employees, labor unions	· New corporate culture based on trust and communication · Enhancement of corporate competitiveness	· CEO's business presentation · Value proposition system and discussion · Labor-management meeting and workshop
Value cooperation	External employees participating in value creation	Suppliers	· Joint participation and cooperation in power generation business · Diversification of power generation-related businesses and cost reduction	· Win-win consultative group of small and medium-sized businesses · NAVER Band and Social Media
Value consumption	Customers sharing created values	Shareholders (KEPCO), citizens	· Stable supply of high-quality, economical electricity · Information disclosure to the public	· The Korean government portal · Website for open management, etc.

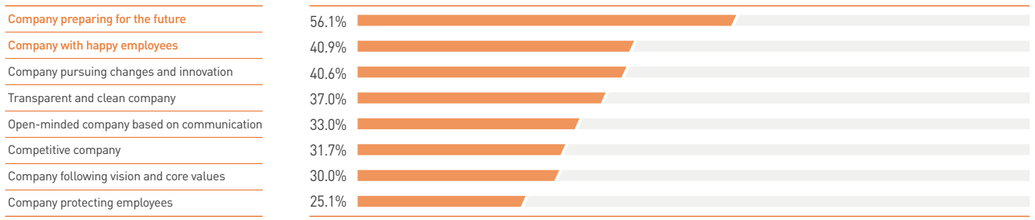
Survey on Awareness of Sustainability Management

By conducting a survey on awareness of sustainability management to the stakeholders, EWP collected their opinions about desirable future corporate images and sustainability issues on which EWP should focus.

Q1. **Which sustainability issues should EWP focus on?**



Q2. **What do you think is the most desirable corporate image of EWP?**



Materiality Assessment

In order to deduct sustainability issues that stakeholders are most interested in and to include them in the 2017 Sustainability Report, EWP conducted a materiality assessment with executives, employees, power companies, government agencies, local governments, business partners, residents and press.

Materiality Assessment Process

EWP deduced 29 issues through an analysis of the international standards, a global benchmarking, a review of internal and external materials and a media analysis.

Based on the 29 issues obtained in Step 1, EWP drew up a questionnaire survey of sustainability management and conducted the online survey with stakeholders for 9 days.

Based on the results of the survey on sustainability management, EWP selected a total of 15 reporting issues, considering the influence on EWP and stakeholders' interest.

Results of Materiality Assessment

EWP selected 15 reporting issues through materiality assessment conducted with 320 stakeholders. In this report, EWP shared about its actions dealing with these issues.

1. Response to climate change
2. An economical and stable power supply
3. Expansion of new and renewable energy
4. Improvement of safety of power plants
5. Management of air pollutants
6. Development of new business
7. Development of convergence power generation technologies through R&D
8. Compliance with the environmental regulations and policies
9. Provision of a safe working environment
10. Management of water quality and the marine environment
11. Shared growth with suppliers
12. Reinforcement of anti-corruption and integrity activities
13. Securing of financial soundness
14. Resolution of a conflict in local communities
15. Social contribution activities

Core Reporting Issues

Key sustainability themes	Key issues	GRI Topic	Stakeholders concerned
Material Issue 1. Stable power supply	2,13	Economic performance and indirect economic effects	Government agencies and residents
Material Issue 2. Enhancement of future growth engines	3,6,7	Economic performance, indirect economic effects and compliance (environment)	Government agencies and power companies
Material Issue 3. Operation of eco-friendly power plants	1, 5, 8, 10, 14	Materials, energy, water, discharge, wastewater, waste and compliance (environment)	Government agencies, residents and environmental organization
Material Issue 4. Happy and safe workplace	4,9	Employment, labor-management relationship, occupational safety and health, training, education, diversity and equal opportunity	EWP employees and employees of business partners
Material Issue 5. Mutual growth with business partners	11	Procurement practices and indirect economic effects	Business partners
Material Issue 6. Happy growth with local communities	15	Local communities and indirect economic effects	Residents and business partners

Support for UN SDGs

The Sustainable Development Goals (SDGs) are the common goals the United Nations and the international society should accomplish from 2016 to 2030 so as to bring an end to global poverty and achieve sustainable development. EWP is contributing to sustainable growth and development by taking part in achieving nine SDGs and especially supporting SDG 5, 7 and 13.

SDGs Goals	EWP Efforts
Goal 2 Zero Hunger	· Farming abalone using hot wastewater · Providing supplementary feed by forming pasture in the ash disposal site
Goal 5 Gender Equality	· Hiring and promoting based on gender equality · Implementing the female manager training system · Regularizing leader education for females
Goal 7 Affordable and Clean Energy	· Developing a large-scale new and renewable energy · Integrating ESS(Energy Storage System) into new and renewable energy
Goal 8 Decent Work and Economic Growth	· Implementing flextime and family-friendly policies and institutionalizing leadership education for senior managers · Implementing Smart Office · Creating jobs related to prospective business
Goal 9 Industry, Innovation and Infrastructure	· Developing and operating new and renewable energy, including wind and photovoltaic power · Recyling wastes like coal ash and gypsum
Goal 10 Reduced Inequalities	· Socially equitable employment of the handicapped and local talents · Hiring women on a career break · Proclaiming the Charter of Human Rights Management
Goal 11 Sustainable Cities and Safe Communities	· Managing and reducing air pollutants · Securing the technology for reducing fine dust
Goal 13 Climate Action	· Over-achieving of the emission trading scheme's goals · Providing greenhouse reduction consulting for SMEs · Implementing adaptation plans for climate change · R&D on carbon utilization and CO_2 separation membrane modules
Goal 14 Life Below Water	· Operating wastewater treatment plant · Conducting post-environmental impact assessment

Goal 5

Gender Equality

To give an equal opportunity for promotion to women, EWP has established four HR tasks to cultivate female managers and set up a goal to increase the percentage of female managers to 6% by 2018. EWP is maintaining the ratio of female employees over 15% when recruiting new employees, and has reduced the minimum service year for female employees so as to provide more opportunities. In addition, EWP provides education on competency development and leadership for female managers, allows a three-year childcare leave, and expands the daycare centers in the offices.

Goal 7

Affordable and Clean Energy

EWP is endeavoring to achieve SDG 7 so as to supply reliable, affordable, and sustainable energy to all. It procures fuels required for power generation at the lowest prices in order to provide affordable energy for consumers. To produce more new and renewable energy, EWP is expanding its large-scale new and renewable energy business such as wind power and bioenergy. In addition, EWP conducted the energy storage system (ESS) project for new and renewable energy for high-efficiency energy and a stable supply of new and renewable energy. EWP is taking the initiative in ensuring future sustainable by leading Power Generation Industry 4.0 based on the convergence of power generation technology and ICT.

Goal 13

Climate Action

EWP endeavors to achieve SDG 13 by minimizing the greenhouse gas emissions from the power plants. To reduce GHG emissions by 20% of BAU as of 2030, EWP implemented 2030 mid and long-term greenhouse gas reduction strategies. Furthermore, EWP surpassed the reduction goals of the emission trading scheme, by incorporating co-firing of low-carbon new and renewable fuel and high-efficient facilities. Also, EWP is developing the technology that blocks CO_2 from entering air and converting it into higher value-added compounds.

RESPONDING TO MATERIAL ISSUES

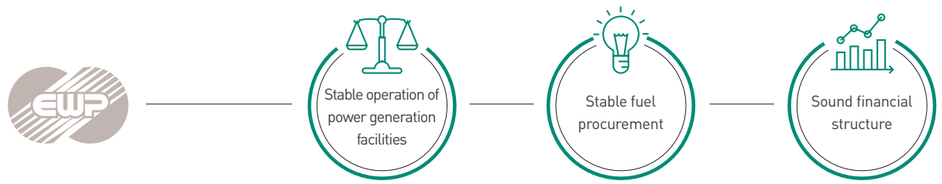
MATERIAL ISSUE

01 STABLE POWER SUPPLY

For national economic development and national welfare, it is essential to stably supply power by forecasting and preparing for a power demand. A blackout resulting from a wrong prediction of power demand or a breakdown of a power generation facility may significantly damage the quality of life of the people and the economic activities of companies. EWP is making efforts to conduct its major projects such as fuel procurement and power plant operation more efficiently and professionally, considering a stable supply of power as a top priority.

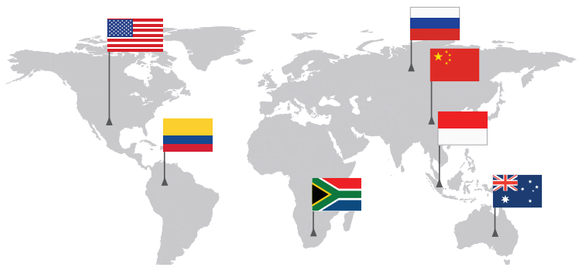
OUR STRATEGY & EFFORTS

EWP focuses on managing power generation facilities, fuel procurement and financial structure soundness to supply power stably. It diversified fuel supplier countries to procure fossil fuels such as bituminous coal used for power generation in time. To minimize breakdowns of power generation facilities in operation, EWP improved facilities causing long-term breakdown and developed the competencies of power plant employees. In addition, it is contributing to a stable supply of power through sound financial management, pursuing profitability, safety, and growth potential.



OUR PERFORMANCES

Diversification of the sources of fuel supply **7 Countries**

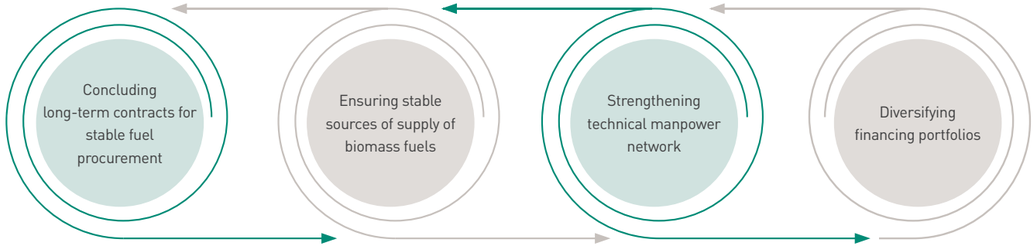


Decreased the forced outage rate by 89% year on year **0.062 %**

Increased rate of operating profits by 12.1% compared to the goal **15.8 %**

Reduced the debt ratio by 119.6% compared to the goal **101.3 %**

FUTURE PLANS



INTERVIEW

In 2016, EWP supplied power stably, recording the lowest forced outage rate since its foundation. To prevent breakdowns, EWP analyzed the pattern of those which have occurred three months before and after an overhaul when a majority of breakdowns would occur. Investing management resources and managing human resources, we achieved the lowest forced outage rate.

Since the foundation, the operational management system of preexisting power generation facilities has been continued and taken root in EWP. However, the management system of new and renewable energy generation facilities such as newly introduced solar panels and wind power generation facilities is still in its early stage. To enhance facility safety and efficiency, EWP is developing drones to inspect new and renewable energy generation facilities thoroughly which cannot be easily accessed by people. Drones will be introduced in late 2017 and expected to contribute to a stable supply of new and renewable energy.

EWP will prevent breakdowns in early stages by enhancing the operational data inspection and analysis system of power generation facilities. We will ensure safer and more efficient power generation facilities based on cutting-edge ICT to become a trustworthy power generation company for the general public.

Jeong Dong-hui

Deputy General Manager
Power Generation Operation Team, EWP

Stable operation of power generation facilities

EWP reinvestigated all causes of the past breakdowns and found that such breakdowns were caused by manpower, organizational factors, and its systems as well as facilities. As a result of diagnosing and improving all issues, EWP recorded the forced outage rate at 0.062% in 2016, which is the lowest since its foundation.

Employee Competency Development

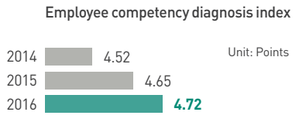
Improving ability to respond to emergency situations

EWP established an emergency response system to share the current situations with other business operations via social media so that an employee who receives the information can inspect facilities swiftly and prevent similar accidents. As a result, EWP was able to prevent and unexpected stoppage through immediate notification to other business operations.

Education for facility workers

EWP formed the Remote Technology Support Group consisting of the head office employees, experts, facility workers and former facility workers, and held a weekly meeting and an emergency meeting whenever a breakdown occurred. EWP improved power generation technology knowledge of facility workers by developing a total of 200 UCCs. As a result, EWP earned 4.72 points in the employee competency diagnosis index.

Employee competency diagnosis index



Employee competency diagnosis index

Participants	New employees	+ New and transferred employees (common)	+ Transferred employees	→ Effects
Contents	· Operation principles, maintenance fundamentals · Utilizing the facility management system	· Handling equipments in the operation · Theories on operation procedures and facility	· Solution for predictive diagnosis · Organizing dis-assembly in the core facility	Enhancement of technical skills (Total 1,190 times)

Rational Organizational Operation

Operation of a technology group

EWP is managing power generation facilities thoroughly by operating the best technology group. In addition, EWP classified technology diagnoses into 29 fields and strengthened the technology group by increasing experts. Experts reviewed technologies from a variety of perspectives and formed the facility inspection group, which visited the business operations quarterly and conducted an on-site inspection.

Efficient personnel allocation in power plants

A proper number of employees should be deployed so that power generation facilities can frequently be inspected and maintained during the peak season, especially in summer and winter, when the power demand skyrockets. EWP efficiently prevented breakdowns by flexibly deploying 24 employees of Ulsan Combined 1, whose utilization rate is low, in Ulsan Combined 2 which has difficulties in operation due to high utilization rates and a shortage of manpower. As a result, the number of breakdowns of Ulsan Combined Heat & Power Plant significantly decreased from 9 in 2015 to 1 in 2016.

Ulsan Combined Heat & Power Plant Forced Outage Rate
0.09%
(Decreased by 81% year on year↓)

Innovation of Breakdown Management Systems

Breakdown time before and after an OH decreased by **94%** year on year

Reorganization of OH management standards

EWP decreased the breakdown time by reorganizing the preexisting OH* management standards. EWP changed a monthly electric installation inspection and a weekly facility analysis into a weekly electric installation inspection and a daily facility analysis, respectively. For a more thorough inspection, head office employees and experts now attend an OH meeting which used to be attended by OH employees only. As a result of extending the OH period by 3 to 6 days to improve OH quality, the breakdown time before and after an OH decreased to 73 hours, by 94% year on year.

* Regular inspection and maintenance work conducted to prevent the breakdowns of power plant units and to improve their performance

Sharing breakdown cases

EWP held a working-level staff workshop and a division head workshop to share and review the breakdown cases, the fundamental causes of breakdowns, etc. Furthermore, the management went off on a lecturing tour to improve employees' awareness of breakdown prevention and enhanced the breakdown case management methods by digitalizing the breakdown casebook, etc.

Improving Facilities Causing Long-term Breakdown

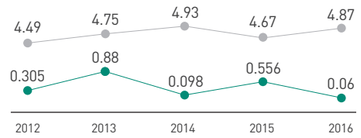
Breakdown of the main bodies of turbines / power plant units
ZERO

EWP tried to resolve chronic breakdown issues by focusing on improving the facilities where breakdowns repetitively occurred. It conducted a customized diagnosis for power generation facilities, evaluated their deterioration and remaining life, and improved the main facilities of turbines such as rotors and connections according to the diagnosis and evaluation results. As a result, no breakdown has occurred in the main bodies of turbines and power plant units in 2016. Furthermore, EWP tried to resolve chronic facility issues by reestablishing the planned maintenance and operation standards, and strengthened the tube monitoring systems such as temperature detection in order to improve CFBC tubes of Donghae Coal-fired Power Plant accounting for 21% of the total breakdown time. Forced outage has not occurred even once for the first time since the CFBC power plant was constructed.

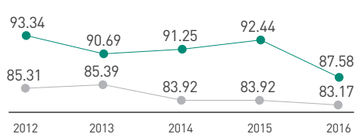
Breakdown Prediction & Warning System

By improving the preexisting warning system which ringed the alarm when reaching a certain level, EWP has introduced and operated the breakdown prediction and warning system that detects abnormal signs of power plants by analyzing data patterns. As a result of detecting the vibrations generated from Dangjin Power Plant Unit 8 at the very beginning and conducting predictive maintenance on Dangjin Power Plant Units 1 to 8 immediately, EWP prevented 217 breakdowns. Analyzing and improving the causes of breakdowns, EWP achieved higher levels than the global forced outage rate disclosed by the NERC (North American Electric Reliability Corporation), recording the forced outage rate of 0.06% and the operating rate of 87.58% in 2016.

Forced Outage Rate



Operating Rate



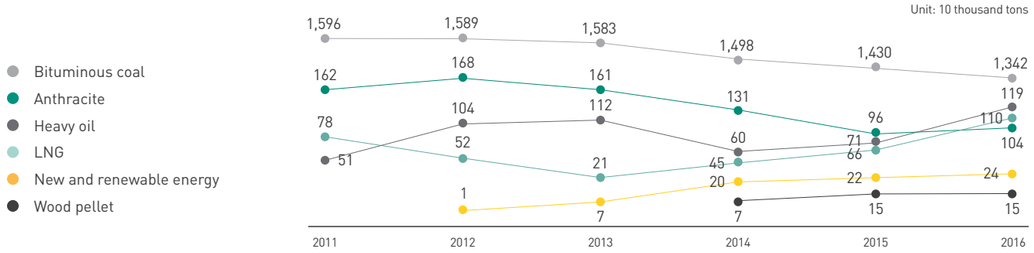
* The forced outage rate disclosed by the NERC (North American Electric Reliability Corporation)

Stable Fuel Procurement

Power generation fuels should be procured in time for a stable supply of power. EWP diversified bituminous coal supplier countries to procure the main fuel of power plants stably and established a cooperative system with suppliers who could provide fuels swiftly in emergency cases.

Fuel Procurement

EWP is producing electricity using a variety of fuels such as coal, heavy oil and LNG. Since 2014, EWP has been generating power using wood pellets, one of new and renewable energy fuels.



Achieved the lowest bituminous coal costs for **seven consecutive years**

Efforts to Reduce Fuel Costs

EWP procures fuels according to the fuel procurement plan, according to the expected future power demand. Based on the results of analysis of the procurement environment, EWP has achieved the lowest bituminous coal costs for seven consecutive years.

Composition of fuel costs	Efforts for efficient fuel procurement
Bituminous coal costs (FOB)	Diversified the fuel supplier countries from the Asian market to the European market
Freight costs (Freight)	Innovatively reduced unit prices by utilizing chartering
Special consumption taxes (Tax)	Increasing alternative purchases between the types of coal
Quality costs (Quality)	Incorporating quality costs into bidding prices

Diversification of Supplier Countries

EWP diversified the sources of supply in preparation for potential risks which may occur in the fuel supplier countries, such as Australia, Indonesia, Russia and the U.S. EWP reduced the fuel purchase quantity from these countries and distributed it to new supplier countries like Columbia, South Africa and China. In 2016, EWP purchased a total of 14,030,000 tons of bituminous coal.

Reinforcement of Emergency Supply Chain

In 2016, Australia and Indonesia which are the main supplier countries of EWP suffered from the railway strike and rainfalls, and such situations were expected to disrupt a stable supply of fuels. To respond the situations preemptively, EWP established a cooperative system with three suppliers in China and Russia as an emergency supply chain in order to procure fuels as soon as possible.

Sound financial structure

In 2016, EWP established the financial management plan and consistently made efforts to achieve the mid and long-term financial goals such as an increase in rates of operating profit, debt ratio management, and an expansion of new business investment.

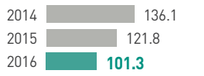
Mid & Long-term Financial Management Plan

EWP has established and managed the mid and long-term financial management plan (2016-2020). By yielding stable financial performance, EWP will make efforts to achieve operating profits of 1.2075 trillion won, debt ratio of 113%, and assets of 19.899 trillion won by 2030.

Financial vision	A competitive public company that maintains a sound financial structure and achieves sustainable growth		
Financial goal	To achieve 1 trillion won in operating profits	To maintain proper debt ratios	To distribute investment assets strategically
Index management	Rate of operating profits: 12% or higher	Debt ratio: 113% or less	Asset growth rate: 3.5% or higher
Financial strategy	Securing of profitability	Maintenance of stability	Expansion of growth potential

Rates of operating profits Unit: %

Debt ratio Unit: %



Securing of Profitability

EWP has been increasing the rates of operating profits by improving the profit structure. Improving power plant units and turbines, EWP reduced the number of breakdown days by 61 days year on year and consequently generated 28.6 billion won in sales. It made over 24 billion won in net profits through additional activities such as a revision of JPS license and a technology seminar. In addition, EWP developed alternative fuels to reduce fuel costs. After such efforts, EWP earned additional 140.2 billion won, more than the operating profit goal in 2016.

Maintenance of Stability

EWP is proactively managing its investment activities exposed to financial risk. In 2016, EWP reduced its investment by 541.5 billion won to construct Dangjin Power Plant Units 9 and 10. For systematic debt management, EWP held a meeting of the Debt Management Committee 43 times to verify the validity of budget execution. As a result, EWP reduced the debt ratio to 101.3% by 20.5%p year on year.

Expansion of Growth Potential

To increase its power generation capacity to 22,800MW by 2030, EWP invested 143.5 billion won which increased by 25.4% year on year. EWP invested 176.6 billion won in future growth businesses such as photovoltaic power and wind power complexes. This figure rose by 147% year on year.

Investment budget Unit: KRW 100 million

Business type	2015	2016	2017	Reasons for variation
Domestic	942	937	1,766	Expanding new and renewable energy, and launching new energy industry from 2017
Overseas	63	45	31	Budget reduction due to the validity test from the government assistance system
Solution	Newly established	36	139	Carrying out tasks for core solution businesses
R&D	139	417	160	Reinforcing R&D investments for new energy industry, and new and renewable energy

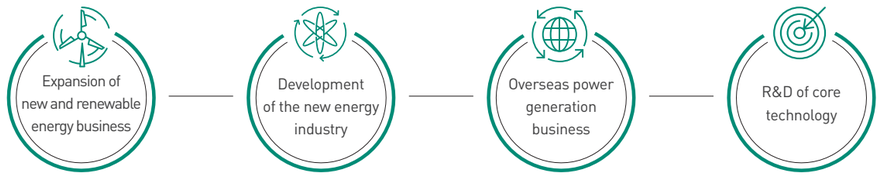
MATERIAL ISSUE

02 ENHANCEMENT OF FUTURE GROWTH ENGINES

As the demand for new and renewable energy and the social needs for the shutdown of outdated power plants are growing, it is urgent to endeavor for the future growth of the power generation industry. In addition, we need to respond to the rapidly changing market where the convergence of knowledge, technology and industry of the coming era of Fourth Industrial Revolution is occurring. Enhancing a sustainable power supply and national competitiveness by forecasting and preparing for rapidly changing energy paradigm is an important task of EWP for the sustainable future.

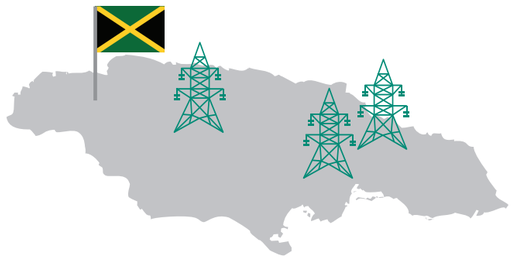
OUR STRATEGY & EFFORTS

EWP is making efforts for R&D of new and renewable energy, new energy business, overseas power generation business and core technology in order to strengthen its future growth engines. EWP is pushing forward large-scale new and renewable energy businesses such as wind power and bioenergy so as to increase new and renewable energy generation, and making alternative plans for practical future power supply by enhancing new energy business development such as the energy storage system (ESS). In addition, EWP is improving its competitiveness by entering the overseas power generation markets and strengthening the foundation for future growth engines by researching and developing key technologies.



OUR PERFORMANCES

Net profit of Jamaica Public Service
24 billion won

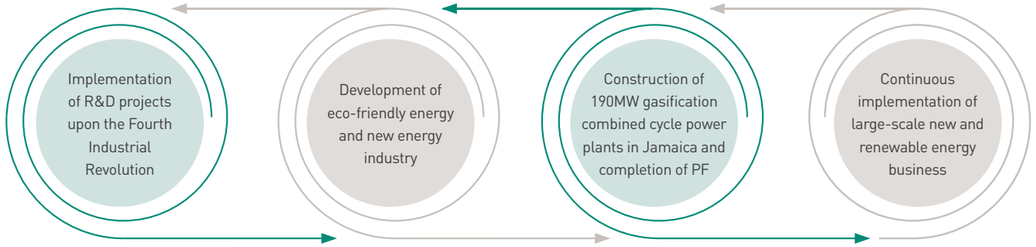


Facility capacity of overseas business
Increased by 49% year on year
1,186 MW

Capacity of new and renewable energy capacity
342 MW

Annual sales of wind farms
24.4 billion won

FUTURE PLANS



INTERVIEW

The New and Renewable Energy 2030 Plan announced by the Korean government is the policy to increase new and renewable energy to 20% of the total power generation by 2030. As part of our efforts, we should supply new and renewable energy accounting for 5% of the total power generation until next year. EWP is focusing on securing land for new and renewable energy development such as wind power and photovoltaic power, and working on Korea's largest wind power project in the East Sea and West Sea regions.

However, renewable energy has limitations, such as irregular electricity production depending on weather changes and securing of land. Therefore, EWP is utilizing biomass as another source of new and renewable energy. As woody biomass such as wood pellets and biomass-solid refuse fuel (Bio-SRF) has lower initial investment costs and produces more power than renewable energy, it has high values in power generation. On a trial basis, EWP is building a 2,000ha forest in Indonesia with the Korea Forestry Promotion Institute. Once the site for afforestation is secured in 2022, EWP will be able to supply fuel stably to EWP Honam Biomass Power Plant that uses 520,000 tons of wood fuels every year.

EWP will make proactive preparations to improve the quality of life of the people by supplying clean energy in full compliance with the new and renewable energy policies of the government.

Kim Myeong-geun

Deputy General Manager
Business Development Team, EWP

Expand New & Renewable Energy Industry

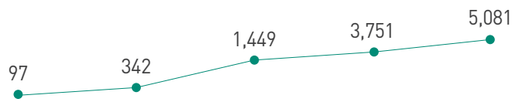
In addition to preexisting photovoltaic power facilities, wind farms and bioenergy power plants, EWP is developing large-scale new and renewable energy business. EWP is planning to increase the facility capacity of new and renewable energy to 20% (5,081MW) of the total power generation facility capacity by 2030.

Road Map for New and Renewable Energy

EWP established the 2030 goals and the mid and long-term roadmap to systematically respond to increasing mandatory supply rates of new and renewable energy. EWP will increase the facility capacity of new and renewable energy to 20% of the total power generation facility capacity by 2030. To achieve this, EWP is developing over 100MW large-scale new and renewable energy generation facilities.

Mid and long-term roadmap for new and renewable energy

Unit of accumulated facility capacity: MW



	2012	2016	2020	2025	2030
IGCC*	-	-	-	400	400
Wind power	20	80	400	1,213	1,763
Photovoltaic power	7	31	589	1,049	1,589
Bio	60	210	279	409	409
Fuel cells	5	11	170	270	510
Others (ocean energy, etc.)	5	10	10	409	409

* Integrated gasification combined cycle

100% RPS implementation in 2016

Compliance with RPS

The RPS is a system that obligates power generation companies with over 500MW power generation facilities to produce a specified fraction of their electricity from renewable energy sources. Since 2014, EWP has achieved 100% RPS implementation rate by consistently supplying new and renewable energy. EWP has established and carried out a stricter new and renewable energy facility procurement plan than the government's standards.

New and renewable energy generation facilities

Unit: MW

Type		Facility capacity	Type		Capacity
Photovoltaic power	Donghae Photovoltaic Power	1.0	Onshore wind power	Yeonggwang Jisan Wind Power	3.0
	Dangjin Photovoltaic Power	1.0	Fuel cell	Ilsan Fuel Cell (I)	2.4
	Honam Photovoltaic Power	0.1		Ilsan Fuel Cell (II)	2.8
	Ulsan Photovoltaic Power	0.5		Ilsan Fuel Cell (III)	2.8
	Dangjin Waste Landfill Facility Photovoltaic Power	1.3		Ulsan Fuel Cell	2.8
	Gwangyanghang Photovoltaic Power	2.3	Biomass	Donghae Biomass (single firing)	30
	Dangjin Warehouse Photovoltaic Power	0.7		Donghae Co-firing	60
	Dangjin Offshore Photovoltaic Power	1.0		Dangjin Sewage Sludge (co-firing)	40
	Suwon Sewage Treatment & Photovoltaic Power	1.5		Dangjin Wood Pellets	30
	Ulsan Sunlight Sharing Photovoltaic Power	0.1		Ulsan Bio Heavy Oil	40
	Gwangyanghang Golden Logistics Center Photovoltaic Power	1.1		Ulsan Refined Oil	2.4
Marine energy	Dangjin Small Hydro Power (I)	5.0	Total: 240 MW		
	Dangjin Small Hydro Power (II)	3.2			

* Based on EWP's facilities

Development of Large-scale New and Renewable Energy Business

Wind power business

EWP is developing large-scale wind power business according to an increase in mandatory supply rates of the RPS. In 2016, EWP has completed construction of Honam Wind Farm, Baeksu Wind Farm and Gyeongju Wind Farm 1, and is constructing Yeonggwang Wind Farm and Gyeongju Wind Farm 2. In addition, EWP is developing two projects for 1 Yeongdeok Hamaji power plant units, etc.

▲ Gyeongju Wind Farm

Wind Power Projects

	Project	Capacity (MW)	Annual sales (100 million won)	REC* secured
Construction completed	Honam Wind Farm	20	68	36,358
	Baeksu Wind Farm	40	112	65,059
	Gyeongju Wind Farm 1	16.8	64	34,140
Under construction	Yeonggwang Wind Farm	79.6	285	155,000
	Gyeongju Wind Farm 2	20.7	83	41,000
Electricity business license	11 power plants including Gadeoksan Wind Farm, etc.	120	483	263,000
Under development	2 power plants including Yeongdeok Hamaji, etc.	468	1,884	1,026,000

* REC (Renewable Energy Certificate): A certificate proving that a power generation company has produced and supplied electricity using new and renewable energy facilities. 1REC corresponds to 1MW (1,000kW).

Bioenergy business

Due to social issues such as fine dust and climate change and the government's coal reduction policy, biomass is emerging as one of the most practical alternatives of the thermal power generation industry. As such, EWP is expanding its bioenergy business using various types of biomass such as waste wood, cow dung, etc. For stable biomass fuel procurement, EWP stably procures woodchips by investing in wood chip manufacturers, and plans to create 20,000ha of forestry in Indonesia with the Korea Forestry Promotion Institute.

EWP is constructing and operating biomass power plants that produce energy by burning wood fuel. EWP has completed construction of Donghae Biomass Power Plant and Seokmun Group Energy Biomass Power Plant. Later, EWP will construct Honam Biomass Power Plant and Saemangeum Cow Dung Power Plant that produces energy using cow dung.

▲ Planning to construct biomass power plants in Honam

Bioenergy projects

	Project	Capacity (MW)	Annual sales (100 million won)	REC secured	Fuel
Construction completed	Donghae Biomass Power Plant	30	365	234,281	Korean woodchips
	Seokmun Group Energy Biomass Power Plant	39	460	350,000	Korean woodchips
Projected	Honam Biomass Power Plant	105	1,516	1,020,000	Woodchips from overseas afforestation projects
	Saemangeum Cow Dung Power Plant	10	151	114,000	Solid cow dung fuel

Development of New Energy Business

EWP is developing and expanding its new energy business which is an alternative of the coal-fired power market. As a solution to meeting the needs of residents who live near a power plant, EWP is planning to construct a new and renewable energy power plant complex and developing technologies to stably supply high-quality new and renewable energy by enhancing its energy storage system (ESS) business.

Establishment of New Energy Business Flagship Model Customized for Each Region

EWP planned to construct a new and renewable energy complex, e-Dream Park on a 340,000m^2 site in Dangjin. e-Dream Park includes a convergence power complex consisting of new and renewable energy business, new energy business, tourism business, an eco-friendly energy attraction relating to new and renewable energy and local tourism resources, and edutainment programs. Furthermore, EWP is planning to construct e-Clean City, which is a model customized for Ulsan where the EWP Head Office is located. In cooperation with local governments, residents and the central government, EWP will develop the future local industries, build an eco-friendly ecosystem, and establish the New Energy Business Development Center.

Implementation of 66MW of "Peak reduction ESS" and "New and renewable energy+ESS" projects

Energy Storage System (ESS) Business

Focusing on ESS* business, EWP concluded a business agreement to promote new energy business with ten organizations and companies including the Ulsan Metropolitan Government, the Korea Energy Agency, etc. Furthermore, EWP carried out ESS MSP business by constructing 22MW of peak-reducing ESS for Ulsan Power Plant and the metropolitan area in Ulsan. For the future, EWP plans to support and expand the consulting service for energy-usage efficiency.

By applying ESS facilities to new and renewable energy whose power generation time is irregular, EWP could capably supply high-quality power. EWP strengthened its future core competencies by implementing the 44MW of "new and renewable energy+ESS" project.

* A device or a physical medium that stores produced electrical power and supplies it when needed

ESS MSP* business

Location of installation	Ulsan Power Plant, EWP	Companies with large energy consumption in Ulsan areas
Capacity(MW)	2	20
Progress	Completed in March, 2017	Launched in August, 2017

* Management Service Provider

ESS project applied to wind power and photovoltaic power

Project	Gyeongju Wind Farm	Baeksu WindFarm	Donghae Sewage Treatment & Photovoltaic Power	Hoengseong Photovoltaic Power Station
Capacity (MW)	11	18	5	10
Progress	Launched in December 2016	Selected EPC* in January 2017	Lease agreement	Obtained electricity business license in October 2016

* Engineering, procurement, and construction

Overseas Power Generation Business

EWP is proactively developing and implementing its overseas power generation business to strengthen its future growth engines. In addition to the preexisting power plants currently operating in the U.S. and Jamaica, EWP concluded new overseas contracts in Indonesia and Jamaica in 2016.

Overseas Business Strategy

For sustainable future growth, EWP is planning to ensure the overseas facility capacity of 500MW by 2020. In 2016, EWP endeavored to establish a foundation for stable profit creation with the goal of increasing the profitability of currently operating overseas power plants and implementing new construction business.

Overseas business strategy

Implementation Goal	500MW in 2020	1,500MW in 2026	2,300MW in 2030
Financial Goal	Securing of stable profit structure of overseas business		
Financial Management	Promotion of the development of new business using the existing network of the business operations		
2016 Business Goals	An increase in profits of key businesses and successful implementation of overseas construction business		

Improvement of Profitability of Overseas Power Plants

Net profit of Jamaica Public Service **24** billion won

Efforts to reduce fuel costs

As 90% of the power generation facilities in Jamaica operated by EWP used oil (petroleum) that is vulnerable to oil price fluctuations as the primary fuel, there was a limitation in ensuring profitability. To diversify fuels, EWP began construction to convert a diesel power plant into a gas-fired combined cycle power plant with Jamaica Public Service (JPS). Also, EWP advised on fuel procurement and provided operational technology education of gas power plants to strengthen technology competencies of local employees. In December 2016, the fuel conversion construction work will be completed, and it is expected to reduce fuel costs by 26.5 billion won every year.

Reduction of power loss rates

EWP installed an IT-based power usage measuring system to reduce power loss rates and improve power utilities of Jamaica Public Service(JPS). As a result of intensifying a crackdown on electricity theft in cooperation with Jamaican police, the power loss rate decreased to 26.82% by 0.22%p year on year and the electricity theft rate declined to 15.84% by 0.14%p.

Expecting to achieve approx. $**4.3** billion from abroad businesses

Overseas Construction Business

EWP ensured a foundation for future profits by winning a project to build the 190MW Gas-fired Combined Cycle Power Plant in Jamaica. EWP will begin construction of the power plant in March and begin its operation in June 2019. The power plant will produce and sell electrical power for 20 years after the completion of construction. EWP is expected to generate as much as $1.6 billion in sales by operating this power plant. Furthermore, EWP ensured an additional revenue stream by successfully winning a project conducted by Perusahaan Listrik Negara (PLN) to build and operate a coal-fired power plant in Kalimantan, the southern part of Indonesia. Kalsel Coal-fired Power Plant 1 will begin operations in March 2019. EWP is expected to generate about $2.7 billion in sales by providing technical support for operation and maintenance and selling electrical power for 25 years.

R&D of Core Technology

EWP is developing generic technologies required for Power Generation Industry 4.0, as well as fine dust and carbon dioxide reduction technologies to cope with the new climate regime. In addition, EWP is taking the initiative in developing new energy business by establishing an industrial-academia-research-governmental cooperative system.

Establishment of Mid and Long-term R&D Strategies

With the R&D goal, "Ensuring future growth engines by developing higher value-added core technologies," EWP established three strategies. EWP has been developing technologies systematically according to the 2021 R&D Road Map.

Mid and long-term R&D strategies

Goal	Ensuring future growth engines by developing higher value-added core technologies		
Strategies	Clean power plants	Smart power plants	Open power plants
	· Reduction of fine dust · Coping with the new climate regime	· Leading the Fourth Industrial Revolution · Leading new energy industry	· Industrial-academia-research-governmental cooperation · Domestic production of key components in cooperation with small and medium-sized companies
Road map	Ensuring of generic technologies (~2016)	Technical advancement (2017~2018)	Commercialization of core technology (2019~2021)
	· Establishment of infrastructure · Selection and development of core technologies	· Verification of core technologies · Development of R&D profit models	· Creation of higher values through ommercialization · Technology transfer and acquisition of engineering fees

Improving the performance of denitration catalysts by **8%**

(Concentration of nitrogen oxides: 47ppm→**43ppm**)

Clean Thermal Power and Responses to the New Climate Regime

Ensuring of fine dust reduction technologies

EWP diagnosed the performance of denitration catalysts that reduce nitrogen oxide generated when petroleum or coal burns, and analyzed cases with Korea Electric Power Corporation (KEPCO) Research Institute and Korea Western Power. EWP has established and followed denitration catalyst management standards, and applied for a patent on new catalysts. As a result, the concentration levels of nitrogen oxides are expected to reduce from 47ppm to 43ppm and to improve the performance of denitration catalysts by 8%. Furthermore, EWP decided to jointly develop new fine dust reduction technologies by participating in the KEPCO Research Institute Steering Committee to reduce fine dust generated from KEPCO and other power companies. EWP will focus on developing an automatic fine dust measuring system and securing data by conducting the thermal power plants' fine dust emission investigation and fine dust reduction technology development project.

Won the **grand prize** at the 1st Public Organizations Global R&D Awards

Development of CCS and NCCU technologies

Carbon capture and storage (CCS) technologies to capture carbon dioxide generated from thermal power plants are being proactively developed all over the world. To improve its carbon dioxide capturing technology, EWP has concluded an agreement with KEPCO Research Institute and other companies having generic technologies so as to separate and treat carbon dioxide waste at low costs and with high efficiency. In addition, EWP is developing non-capture CO_2 utilization (NCCU) technology to convert carbon dioxide into higher value-added compounds. This technology produces ingredients such as baking powder by reacting carbon dioxide with caustic soda (NaOH) without a capturing process. With such technologies, EWP will generate about 300 billion won in accumulated sales and reduce over 350,000 tons of greenhouse gases for 20 years.

Launched R&D project on saltwater battery-based ESS for the first time in the world

▲ Industrial-academia cooperation to establish the salt water battery-based ESS

Establishment of R&D Cooperation Network

EWP has established an industrial-academia-research-governmental cooperation network to utilize external human resources, ideas, and technologies, and has been developing commercialization technologies based on the network. EWP is conducting a total of three R&D projects including saltwater battery-based ESS, and taking an active part in technology development through support for power plant verification, R&D investment and technology transfer.

R&D projects

Technology	Salt water battery-based energy storage system (ESS)	Solid fuel cleaning system of biomass power plants	Technology to recycle coal ash as a construction material
Description	Developing batteries to produce and store electricity using infinite seawater instead of high-priced lithium	Improving the working environment and facility reliability by capturing and reutilizing fugitive dust as fuel in the fuel storage	Utilizing coal waste as a concrete material without processing
Research period	2016~2018	2016~2018	2016~2017
Business partners	EWP, small and medium-sized businesses, UNIST, KTC, KTR, and Ulsan Metropolitan Government	EWP and small and medium-sized businesses	EWP, UNIST, and small and medium-sized businesses
Roles of EWP	· On-site verification of 10kW in Ulsan Power Plant and investment in R&D · Provision of cell materials and components	· Support for on-site verification · Investment in R&D and technology transfer	· Provision of coal ash · Development of profit models

Leading Industry 4.0 based on Information and Communication Technologies (ICT)

Power Generation Industry 4.0 Technology Development

To enhance its competitiveness in rapidly changing industrial markets, EWP is leading Power Generation Industry 4.0 based on its technologies accumulated from an abundance of experience in constructing and operating various types of power plants and cutting-edge ICT. EWP has successfully developed and applied the "ESS (Energy Storage System) for frequency control" to stably adjust constantly changing frequencies (60Hz) of power systems. EWP is currently developing 3D printers to produce metal components for power generation and IoT-based monitoring technology to detect abnormal signs of power plants in advance.

Furthermore, EWP has established a joint R&D cooperation network with ICT companies* and created an IoT system for the operation, maintenance and safety of coal-fired power plants. EWP will realize a smart power plant with enhanced automation technology by applying cutting-edge ICT to Dangjin Power Plant Units 9 and 10.

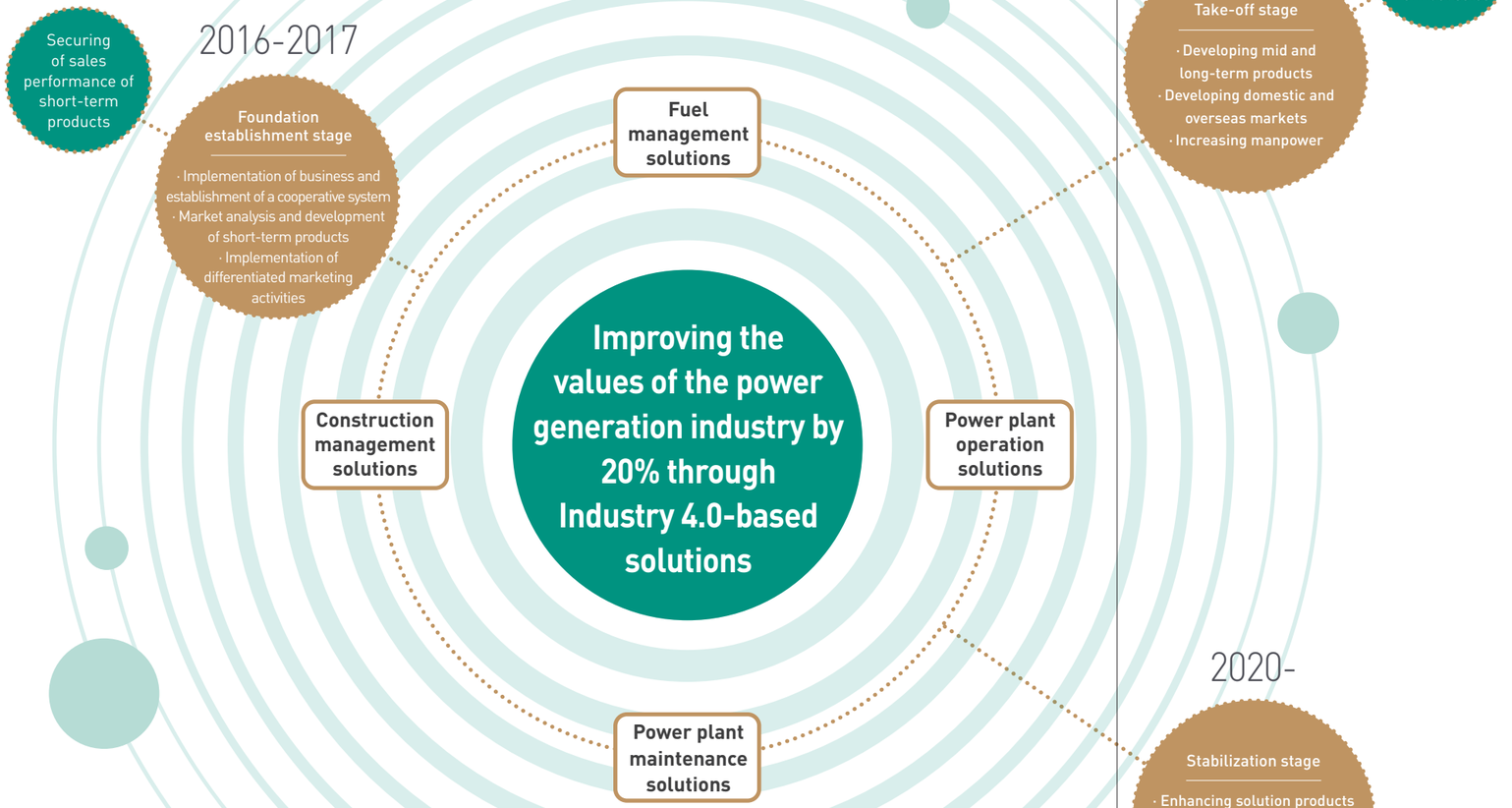
* Participants: EWP, SK Telecom, KEPCO KDN, and Korea Electric Power Industrial Development

Goals of Power Generation Industry 4.0 Technology Development

Establishment of a foundation (~2015)	Technology development (2016~2019)	Commercialization (2020~)
· Understanding of current technologies · A review on economic feasibility and applicability	· Application of technologies to the power generation industry · Ensuring of generic technologies	· Verification of profit models · Inroads into domestic and overseas markets

Special Issue 01

Power Generation Technology Solution Business Leading Industry 4.0



What is power generation technology solution business?

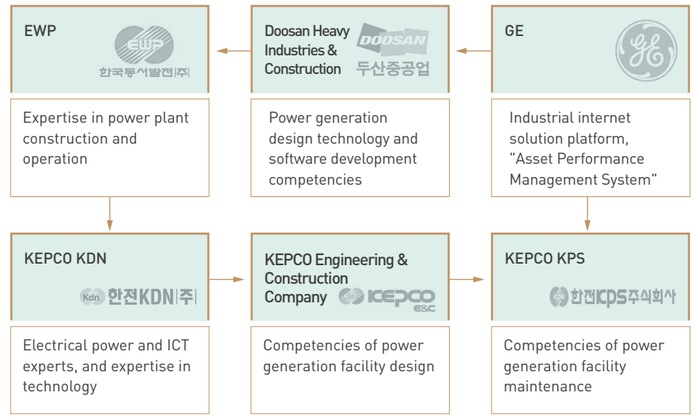
Power generation technology solution business, first introduced by EWP, is new conceptual convergence business that applies cutting-edge ICT (IoT, ICT, big data, AI, etc.) to operational information collected from thousands of sensors of power plants, on-site knowledge, experiences, and problem-solving skills. This business including technology consulting and operation service is a type of service business extended from the power generation industry, which is the main business of EWP. In June 2016, EWP formed the Power Generation Technology Development Center to lead Power Generation Industry 4.0 and has been providing optimized solutions for numerous new private power generation companies, based on the convergence of power generation technology resources and ICT. Through this win-win growth structure, private power generation companies could ensure power plant operation and maintenance technologies at low costs and high efficiency while EWP could develop future growth businesses in the power generation industry.

EWP Plan

EWP is seeking to improve the values of the power generation industry through Power Generation Industry 4.0-based solution business. To achieve this systematically, it is operating the Power Generation Technology Development Center consisting of 54 employees. EWP conducts monitoring by holding a project monitoring meeting and a head office executives' meeting twice a month.

EWP Strategy

To provide the best quality solution products for customers, EWP is establishing a Power Generation Industry 4.0 cooperation system by concluding a technical cooperation agreement with private companies and public organizations. EWP will take the initiative in innovating the power generation industry based on its accumulated expertise in power plant construction and key competencies of business partners.



2016 EWP Performance

In 2016, EWP launched performance management and facility diagnosis service for private power plants. It generated its first solution business sales of 160 million won by diagnosing the performance of outdated power plants and facilities of corporate customers. In addition, it recorded sales of 1.2 billion won by winning a contract to establish an integrated facility management information system. EWP is working on selling its expertise in construction of Dangjin Power Plant Units 9 and 10, including 4D systems. Once a contract is concluded, EWP is expected to generate about 5 billion won in profits.

Employees · Electric Power Corporations · National and local governments · Business partners · Local residents · Environmental Organization

MATERIAL ISSUE

03 OPERATION OF ECO-FRIENDLY POWER PLANTS

Social concerns over environmental pollution are mounting due to abnormal weather conditions resulting from climate change, fine dust, etc. As the new government strengthened environmental policies, there is a growing emphasis on companies' responsibility for the environment, such as reduction of greenhouse gases and management of air pollutants. In the rapidly changing environment, EWP is making efforts to operate eco-friendly power plants for the sustainable growth of the power generation industry.

OUR STRATEGY & EFFORTS

EWP simulated mid and long-term greenhouse gas emissions and set a goal to reduce it by 20% of expected emissions as of 2030. In addition, EWP established enterprise-wide countermeasures against climate change in 2016 for a stable national power supply by preparing for various climate changes in advance. Furthermore, EWP is taking an active part in reducing fine dust by minimizing air pollutants and strictly managing fugitive dust, coal ash, etc. EWP also conducts various environmental projects such as formation of pastures and farming abalones for coexistence with residents.

Responses to climate changes — Preservation of a clean environment — Environmental projects for coexistence with residents — Zero environmental risk

OUR PERFORMANCES

Accumulated greenhouse gas reduction according to the emission trading scheme

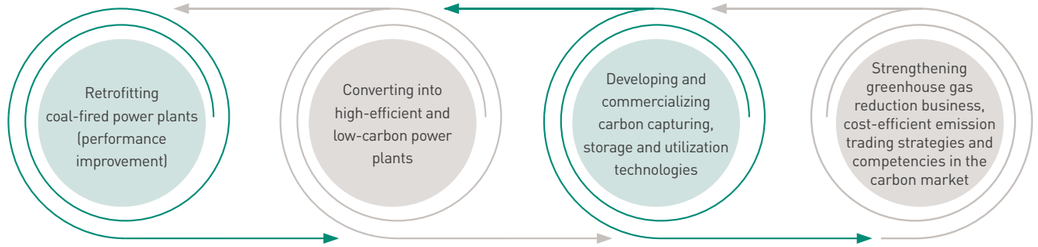
2.7 million tons
(corresponding to 54 billion won)

Climate change competitiveness index in the power generation industry — **No.1** 6 consecutive years

Voluntarily participated in the Carbon Disclosure Project (CDP) — **Five** consecutive years

Air emissions reduction compared to the previous year — **13 %** reduced

FUTURE PLANS



INTERVIEW

With the intended nationally determined contributions (INDCs) submitted by each country as per the Paris Agreement, the burden of greenhouse gas reduction on the industrial world is now on the rise. As EWP, and the power generation industry as a whole, engages in large-scale business activities and is directly related to carbon dioxide emissions, the national greenhouse gas reduction project is deemed as a corporate social responsibility. Furthermore, the current government selected fine dust reduction as one of 100 national projects. In such situation, EWP needs strategies to flexibly respond to the rapidly changing business environment.

EWP has proper carbon dioxide and air pollutant management systems in place as a public organization representing the Korean energy industry. As part of its corporate social responsibility, EWP should pass down its environmental management tools which have been established and nurtured for a long time to its supply chain, in order to make a lasting and positive environmental impact together.

The government is providing proactive support and endeavoring to improve air quality and reduce greenhouse gas emissions. It is expected that EWP shall grow as a company which can systematically manage environmental strategies and indices, and identify and supervise the supply chain's environmental impact.

Kim Kyung-shin

Professor at Department of Environment & Energy Engineering, Sungshin University

Responses to Climate Change

EWP has been voluntarily participating in greenhouse gas reduction projects before the implementation of the emission trading scheme in 2015. Since then, EWP expanded the usage of low-carbon fuel, improved facility efficiency, developed new and renewable energy facilities, etc. to fulfill the goals of the emission trading scheme.

2030 Mid & Long-term Greenhouse Gas Reduction Strategies

The government has set a goal to reduce greenhouse gas emissions by 37% of BAU (Business As Usual) by 2030. According to this goal, the power generation industry should reduce greenhouse gas emissions by 19.4%, corresponding to 64.5 million tons. EWP has accordingly established mid and long-term greenhouse gas strategies and the goal to reduce 9.78 million tons of greenhouse gas emissions.

2030 mid and long-term greenhouse gas reduction strategies

Strategic goal	To reduce greenhouse gas emissions by 20% of BAU as of 2030				
Strategic tasks	Improving facilities	Converting to low-carbon power plants	Expanding new and renewable energy	Carbon capturing	Ensuring of emission allowance
Implementation tasks	Retrofitting coal-fired power plants (performance improvement) and reducing service power	Replacing old power plants with high-efficient power plants	Ensuring 20% of facility capacity by 2030	Developing and commercializing CCS* and CCU**	GHG reduction business, purchasing emission trading and strengthening competency
2030 reduction goals	720,000 tons	3.35 million tons	4.78 million tons	80,000 tons	850,000 tons

* Carbon capture and storage ** Carbon capture and utilization

GHG Emissions Reduction

Greenhouse gas emissions Unit: 10,000 tons

Reduction of GHG emissions according to the emission trading scheme Unit: 10,000 tons

Accumulated : 270

Introduction of low-carbon new and renewable fuel co-firing and high-efficient facilities

EWP reduced a total of 970,000 tons of greenhouse gases by utilizing sewage sludge and low-carbon fuels such as woodchips and bio heavy oil. In addition, EWP reduced a total of 290,000 tons of greenhouse gas emissions by increasing the efficiency of Dangjin Power Plant Units 9 and 10 and Ulsan Combined Heat and Power Plant Unit 4. EWP's greenhouse gas reduction has already surpassed its goal, and its economic effect has reached 54 billion won.

Efforts to reduce GHG emissions (new and renewable fuels)

Dangjin Power #1-4 (Reduction of CO_2 by 260,000 tons)	Donghae Thermal Power Plant (Reduction of CO_2 by 420,000 tons)	Ulsan Steam Power Plant (Reduction of CO_2 by 290,000 tons)
· Sewage sludge, etc. of five local governments including the Seoul Metropolitan Government (2% co-firing)	· #1-2: 5% co-firing of woodchips · #3: 100,000 tons of biomass (single firing)	· Bio heavy oil (15% co-firing)

Introduction of carbon utilization and CCS membrane technology

Since 2013, EWP has been developing a CCS membrane technology, along with non-capture CO2 utilization technology, which provides higher value-added compounds such as baking powder using carbon dioxide. Through the membrane technology, carbon dioxide can be processed at a low cost and high efficiency. This technology is expected to reduce operating costs by 50% and decrease wastewater and installation space.

Step 1
Design in 2016
A feasibility study on construction, and test-bed design

→

Step 2
On-site test in 2017
Application test in Dangjin Power Plant (#5, 1MW)

→

Step 3
Commercial design in 2019
Development of separation membrane modules and commercial technology

Support for small and medium-sized businesses to reduce emissions: **580** tons

Greenhouse reduction consulting for small and medium-sized businesses

Since 2012, EWP has been participating in the mutual growth energy project to improve the energy efficiency of small and medium-sized businesses and reduce their greenhouse gas emissions. Through this project, EWP is sharing its expertise in saving energy and reducing greenhouse gas emissions. It has provided consulting for about 20 small and medium-sized businesses so far. In 2016, EWP provided consulting for five small and medium-sized businesses.

What is **RCP** Scenario?

(Representative Concentration Pathways)

As a future GHG scenario implemented to the GHG policies in the global society, RCP Scenario calculates **RCP 4.5** for carbon dioxide with **540ppm** in the air, and **RCP 8.5** for carbon dioxide with **940ppm** not being managed by GHG policies.

Establishment of Countermeasures against Climate Change

As environmental issues are becoming worse, there is a growing emphasis on the importance of "adaptation," along with the reduction of GHG emissions. In order to protect power plants from climate change and to establish mid to long-term plans for safety of people and prevention of service halt, EWP established the "2016 Countermeasures against Climate Change." EWP carried out vulnerability test and risk evaluation, and established the countermeasures according to the results of RCP Scenario. In the future, EWP will re-diagnose climate change risks every 5 years and re-establish the countermeasures accordingly.

Procedure for establishing countermeasures against climate change

Steps	Methods	Details
An analysis on and prediction of climate change	Climate change scenario	· Analyzing attributes of each operation (geography, climate, etc.) · Analyzing tendency of climate change, predicting future climate change
Evaluation on vulnerabilities of current climate	Vulnerability evaluation tool	· Collecting, evaluating and analyzing the vulnerability evaluation · Selecting facility and areas for implementing the countermeasures
Evaluation on future climate change risks	Risk evaluation tool	· Setting up levels of climate exposure · Selecting and evaluating types of climate change risks
Establishment of detailed plans	Domestic and abroad adaptation option DB	· Analyzing cases and costs of domestic and abroad countermeasures · Setting priority and establishing specific plans

Differentiated Responses to Climate Change

Voluntary participation in the Carbon Disclosure Project (CDP)

EWP has been voluntarily participating in the Carbon Disclosure Project (CDP) for five consecutive years. The CDP evaluates leading global companies' efforts to reduce carbon dioxide. In 2015, EXP disclosed more information including indirect greenhouse gas emissions. For three consecutive years, EWP was designated as an excellent company by the CDP, and its competitiveness to respond to climate change was highly regarded.

▲ Awards ceremony for Carbon Disclosure Project (CDP)

Ranked 1st in Climate Change Competitiveness Index

EWP has ranked 1st in the climate change competitiveness index for six consecutive years. The climate change competitive index evaluates companies' competitiveness to respond to climate change in five aspects (climate risk, climate performance, market opportunity, policy cooperation and responses to climate) and rewards excellent companies. It was the result of the competitiveness of EWP's activities to respond to climate change such as the operation of the climate change response system, the surplus achievement of GHG emission goal, and R&D for the reduction of greenhouse gas emissions.

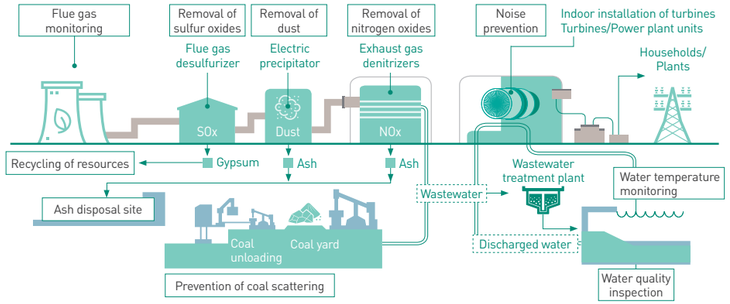
Preservation of a Clean Environment

EWP has installed and operated air and water quality preservation facilities, and managed wastes under its own standards, which is stricter than the legal criteria.

Environmental Management System

EWP is operating cutting-edge environmental protection facilities in order to minimize environmental pollutants which are generated during electricity production, and managing and disclosing environmental management information in real time.

Environmental pollutant treatment diagram



Air Quality Management

EWP installed air quality protection facilities such as desulfurizers, denitrification facilities and electric precipitator. In addition, EWP has established stricter emission allowance standards than the legal standards to manage pollutants emissions.

Air quality protection facilities

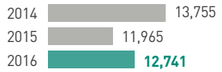
Power Plant	Efforts for Fuel Procurement		Denitrification Facilities		Dust Collector	
	No. of units installed	Type	No. of units installed	Type	No. of units installed	Type
Dangjin Thermal	10	Wet limestone-gypsum method	10	SCR	10	Electric Precipitator
		Gypsum process				
Ulsan Thermal	3	Wet limestone-gypsum method	5	SCR	3	Electric Precipitator
		Gypsum process	3	SNCR		
Honam Thermal	2	Hydroxide	2	SCR	2	Electric Precipitator
		Magnesium hydroxide method		SNCR		
Donghae Thermal	2	Desulfurization in a dry furnace	-	-	2	Electric Precipitator

Legal air pollutants emission allowances and 2016 emissions by power plant

Power Plant	SOx (Unit:ppm)		NOx (Unit:ppm)		Dust (Unit: mg/Sm3)	
	Regulation	Emissions	Regulation	Emissions	Regulation	Emissions
Dangjin(#1~8)	100	21	140	68	25	5
Dangjin(#9~10)	80	22	70	47	20	3
Ulsan Steam	150	56	150	129	20	7
Ulsan Combined 1	35	-	80	46	15	-
Ulsan Combined 2	35	-	50	8	15	-
Honam	100	70	140	116	25	3
Donghae	150	82	140	44	25	4
Donghae Bio	30	2	70	24	20	3
Ilsan	35	-	80	34	15	-

Air quality protection facilities Unit: tons

SOx



NOx

Dust

Operating the advanced wastewater treatment system

Water Quality Management

Although wastewater generated during various processes contains water pollutants such as COD, SS, TN (total nitrogen), and TP (total phosphorus), EWP treats and purifies the wastewater using its own advanced wastewater treatment system applied with stricter water quality standards than legal standards. After this treatment process, wastewater is reused as processed water or discharged.

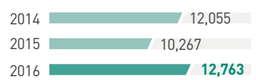
Water quality protection facilities

Power Plant	Facility type	Treatment capacity (m³/hr)
Dangjin Coal-fired Power Plant	General waste water treatment	293
	Desulfurization waste water treatment	197
Ulsan Oil-fired & C.C Power Complex	General waste water treatment	190
	Desulfurization waste water treatment	8
Honam Coal-fired Power Plant	General waste water treatment	120
	Desulfurization waste water treatment	150
Honam Coal-fired Power Plant	General waste water treatment	30
Ilsan Combined Heat & Power Plant	General waste water treatment	60

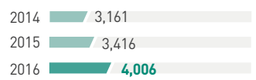
Legal water pollutants discharge allowances and 2016 discharge by power plant Unit: mg/ℓ

Power Plant	Area (type)	COD		SS		Total Nitrogen		Total Phosphorous	
		Regulation	Emissions	Regulation	Emissions	Regulation	Emissions	Regulation	Emissions
Dangjin	Area B (Grade 1)	90	4.7	80	1.9	60	5.9	8	0.055
Ulsan	Area B (Grade 1)	90	6.1	80	3.9	60	7.1	8	0.034
Honam	Special Area (Grade 1)	40	9.3	30	5.3	60	16.7	8	0.2
Donghae	Special Area (Grade 3)	130	2.3	120	0.5	60	2.1	8	0.005
Ilsan	Area B (Grade 1)	40	2.8	10	1.8	60	7.1	0.5	0

Usage of service water Unit: 1,000 tons



Wastewater generated Unit: 1,000 tons



2016 Waste Recycling Rate **87**%

Management of Waste

EWP recycles coal ash, synthetic resin, waste oil, etc. among 30 different kinds of waste generated from power plants. EWP is endeavoring to increase its resources recycling rates by developing new recycling methods. In case of non-reusable materials, EWP outsources their treatment to proper waste treatment companies.

Waste production and recycling

Classification	2014	2015	2016
Waste production (1,000 ton)	1,906	1,824	1,965
Basic unit quantity (ton/GWh)	37	37	38
Recycled Q'ty (1,000 ton)	1,851	1,635	1,706
Recycled Rate (%)	97	90	87

No usage of hydrazine, methanol and chlorine dioxide

Management of Chemicals

Use of hazardous chemicals and safety management

Although the chemicals required for power generation are not harmful to the environment, EWP replaced some hazardous chemicals with alternative substances to ensure a safe workplace and minimize the risk of damage in case of a chemical accident. In addition, it has established and operated a chemical management system for systematic chemical safety management, and conducted a safety diagnosis of chemicals and dangerous articles, a self-inspection on facilities, etc. EWP is making efforts to prevent chemical accidents by establishing an emergency response process and conducting atmospheric diffusion modeling in case of a chemical accident.

Use of hazardous chemicals

Unit: ton

Classification	Dangjin	Ulsan	Honam	Donghae	Ilsan
Hydrochloric acid	931	455	109	11	73
Caustic soda	963	1,378	1,793	26	62
Ammonia	4,105	1,114	1,832	0	0
Ammonia water	0	0	0	0	195
Hydrazine	Replaced with safe and normal chemicals				
Methanol					
Chlorine dioxide					
Total	5,999	2,947	3,734	37	330

Off-site impact analysis and risk management planning

To comply with the government's chemical accident response policy, EWP drafted an off-site impact analysis plan and a risk management plan. According to the plans, EWP operates the accident prevention system encompassing facility installation, operation and emergency in order to preemptively respond to the potential damages of a chemical accident for people and the environment.

Participation in Chemi-Cation Week 2016

▲ Chemi-Cation Week 2016

As more and more people grow concerned about chemicals after the Oxy incident (the pulmonary toxicity of PHMG), the Korean government held Chemi-Cation Week* to communicate with the general public about the harmfulness of chemicals and prevention of their use. In this event visited by about 20,000 people, EWP operated a PR booth to share information about eco-friendly chemicals management and high-efficient operation of environmental facilities for safe chemical management and accident prevention.

* The portmanteau "chemi-cation" formed from the words "chemicals" and "communication" means communication between the government, the industries and the public about chemicals.

Noise and Soil Management

In an effort to minimize noise from its power plant turbines and substations, EWP has installed and operated noise monitoring systems in real time. The systems issue alarms and immediately send out text messages to the personnel in charge when an extraordinary level of noise occurs. Upon the request of the personnel, the Control Centers of power plants take immediate actions on noise sources, including steam discharge noise and opening of safety valves. As part of its efforts to prevent soil contamination, EWP carries out soil contamination inspections and leakage tests. An annual soil contamination inspection focuses on inspecting soil contamination, caused by oil due to the storage and handling of fuel for power generation.

Environmental Projects for Coexistence with Residents

There have been many complaints from residents due to the environmental issues of power plants such as fugitive dust from coal yards, etc. In such situations, EWP prepared fundamental solutions by establishing environmental model support projects for coexistence with local communities.

Efforts to Prevent Fugitive Dust

Indoor installation of coal yards

EWP built coal yards where coal and charcoal are stored indoors in order to minimize environmental issues for residents. EWP first constructed Dangjin Closed Type Indoor Coal Yard 3 in 2015 and is now working on converting Coal Yards 1 and 2 into indoor coal yards. EWP will convert all its coal yards into indoor types by 2021 so as to reduce the environmental burden on residents.

Indoor installation steps

Step 1 2015
- Constructed Dangjin Closed Type Indoor Coal Yard 3 (August 2015)

Step 2 2016
- Conducted a preliminary survey on Coal Yards 1&2 for indoor installation, and formed the TF Team for indoor coal yards

Step 3 2017
- Conducted a preliminary feasibility study and established a basic plan (November 2017)

Step 4 2021
- Completed construction of indoor coal yards

Strengthened competitiveness of local livestock farms and saved **200 million won**

Formation of pastures

EWP is contributing to vitalizing the rural economy by forming pastures in the idle land of the ash disposal sites where coal ash is buried. In 2016, Dangjin Coal-fired Power Plant sowed rye seeds in about 20,000 m^2 farmlands in cooperation with local livestock farms. As a result, residents' environmental complaints relating to fugitive dust greatly decreased, and local farms saved about 200 million won by reducing the farmland rent and replacing imported supplementary feed with alternative feed.

Formation of pastures

EWP (Host)
- Construction of the idle land of ash disposal sites
- Permission for occupancy and use of public waters

Local livestock farms
- Formation of pastures
- Use of supplementary feed at low prices

Local government
- Support for licensing and livestock management
- Reinforcement of infrastructure for production of supplementary feed

· (EWP) Resolving environmental complaints
· (Farms) Saving about 200 million won by replacing imported feed with alternative feed, etc.

Saving coal ash reclamation costs by **1.2 billion won** every year

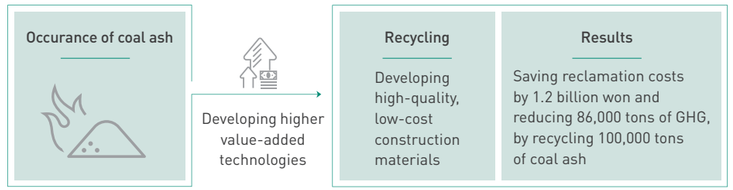
Recycling of Resources

According to the Framework Act on Resource Circulation*, reclamation costs of coal ash disposal sites will be additionally incurred from 2018. To increase coal ash recycling rates, EWP developed low-priced, high-quality construction materials by improving the preexisting recycling method. EWP reduced the weight of construction materials by 15% and could save production costs by 30% with the new materials. Furthermore, EWP and Ulsan National Institute of Science and Technology (UNIST) worked on developing bottom ash** recycling technology for concrete.

* The purpose of the Framework Act on Resource Circulation is to minimize waste by utilizing resources efficiently and to reduce the consumption of natural resources and energy by recycling waste and promoting proper disposal.

** A type of coal ash generated from bituminous coal-fired power plants. Unlike fly ash which is recycled as an ingredient of cement, etc., most bottom ash is buried.

Recycling coal ash



Recycling of gypsum and coal ash

Type		2014	2015	2016
Gypsum	Generation (1,000 tons)	467	495	509
	Recycling (1,000 tons)	459	480	507
	Recycling rate (%)	98.3	97	99.6
	Use	Gypsum board, cement ingredient, etc.		
Coal ash	Generation (1,000 tons)	1,872	1,801	1,881
	Recycling (1,000 tons)	1,844	1,616	1,699
	Recycling rate (%)	98.5	89.7	90.3
	Use	Concrete admixture, cement ingredient, construction fill materials, etc.		

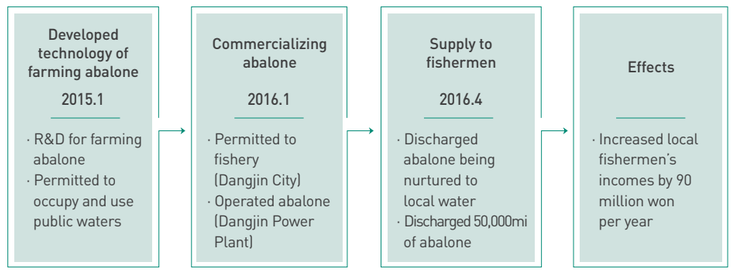
Increased local fishermen's annual incomes by **90** million won

▲ Abalone farm near Dangjin Coal-fired Power Plant

Recycling of Hot Wastewater

EWP established environmental model support projects for coexistence with residents by commercializing abalone using hot wastewater discharged from power plants. As a result of farming abalone using hot wastewater, its survival rate increased to 75%. The high survival rate of abalone increases farmers' and fishermen's annual incomes by 90 million won. EWP will increase the use of hot wastewater by constructing farm complexes for bell peppers, tomatoes, etc. in the neighboring areas of power plants.

The system of recycling hot wastewater



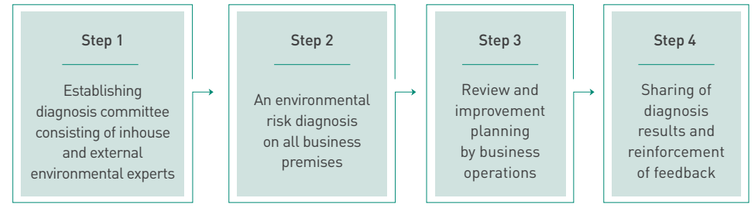
Zero Environmental Risk

EWP is making various efforts to prevent environmental risks. EWP is developing the competencies of working-level staff in response to the causes of risks deducted from an environmental process inspection by power plant. In addition, it monitors the air and water quality of neighboring areas through a post-environmental impact assessment until the fifth year of power plant operation.

Inspection and Implementation of Environmental Diagnosis Process

EWP sought to improve its ability to respond to the environmental regulations by employing inhouse lawyers and its diagnosis committee consisting of inhouse and external environmental experts conducted an environmental diagnosis process. Through this process, EWP took enterprise-wide environmental and technical advice, and improved the effectiveness of an environmental diagnosis by establishing an improvement plan and providing competency development training.

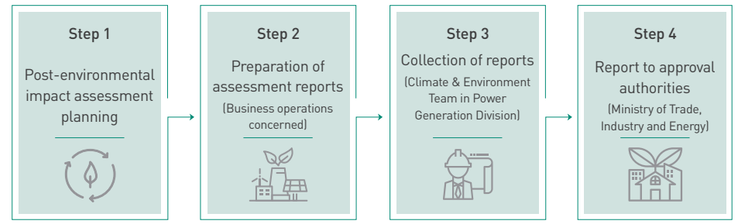
Environmental diagnosis process



Post-environmental Management

EWP is systematically managing the environmental impact on power plants by conducting an environmental impact assessment and by holding a power plant operation meeting during the service life of power plants. In addition, EWP assesses air quality, noise, and soil of the neighboring areas of power plants with the assessment agency's support. The results are reported to approval authorities such as the Ministry of Trade, Industry and Energy.

Post-environmental management procedure



Current status of post-environmental impact assessment

Power Plants	Dangjin #1-8	Dangjin #9-10	Donghae	Ulsan Combined-cycle Power #4
Assessment period	1994.07-2017.12	2009.10-2021.06	2011.12-2018.07	2012.06-2019.07
Assessment items	Diffusion of hot wastewater, air quality, noise, soil, seawater quality, marine sediment quality, marine ecosystem, agricultural products, terrestrial plants and eco-friendly resource circulation			

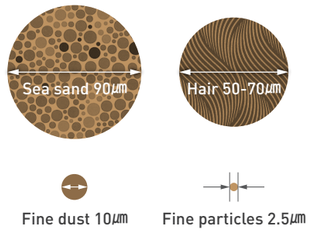
Special Issue

02 Understanding Fine Dust

Composition and sources of fine dust

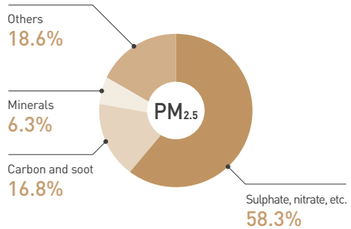
Fine dust is classified into inhalable coarse particles (PM_{10}) and fine particles ($PM_{2.5}$) depending on its size. Fine dust is composed of sulphate/nitrate (58.3%) generated during the combustion of fossil fuels of automobiles, power plants and industrial processes, and carbon/soot (16.8%) resulting from the unstable combustion of fossil fuels. In addition to artificial sources such as fossil fuel combustion, automobiles, industrial production processes and biomass combustion, fine dust is generated from natural sources including yellow dust, volcanic activities, dust, pollen and scattering salt from waves.

Size of Fine Dust



Composition of Fine Dust

Unit : %



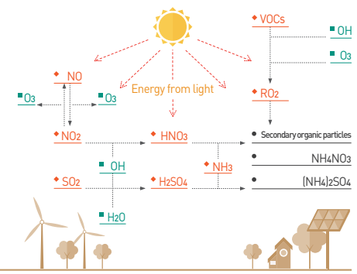
Effects on human health

Fine dust affects human health in different ways depending on its size. Although fine dust with a diameter of over 50㎛ accumulates on or naturally settles into the ground, fine dust with a diameter of 2.5㎛ or less may penetrate into the blood vessels via the lungs, skin, etc. or cause circulatory disorders in the human body.

Types of emissions

Fine dust may be directly emitted as particles from its sources or indirectly discharged through photochemical reactions of gases, such as SOx, NOx, etc. In case of indirect emissions, precursors such as SOx and NOx resulting from fossil fuel combustion are oxidized by reacting with water vapor, ozone (O_3), etc. and these oxides generate secondary fine dust through reacting with ammonia (NH_3) in the air.

Secondary formation process of fine dust ($PM_{2.5}$)



EWP's Efforts to Reduce Fine Dust

Agreement on the fine dust reduction goal with the government

According to the Ministry of Environment, the thermal power plants constitute 14% and 11% of fine dust in nationwide and metropolitan areas, respectively. As thermal power plants are blamed as one of the causes of fine dust, the government and the energy industry formed a consultative group to improve air quality. Power generation companies agreed to reduce pollutants by 50% of the emissions of 2015 until 2030.

EWP's fine dust reduction goal

To achieve its own fine dust reduction goal, EWP has established and carried out a phased environmental facility and high-efficient facility replacement plan in consideration of power demand.

2030 Companywide reduction of air pollutants by 77% (coal-fired power plants)

Steps	STEP 1. 2019	STEP 2. 2022	STEP 3. 2030
Goals	31% ↓ compared to 2015	53% ↓	77% ↓
Reduction measures	• Dangjin#1~8: 1st stage of denitration catalysts • Donghae#1,2: Constructing denitrification facilities • Honam#1,2: Replacing denistration catalysts	• Dangjin #1~8, Donghae #1,2: Replacing and constructing high-efficient environmental facilities • Honam#1,2: Replacing fuels and converting into biomass	

Preemptive facility improvement

15%

Reduced air pollutants from coal-fired power plants by 15% year on year through preemptive facility improvement

Early reduction strategy

60,000 Tons

Planning to reduce fine dust precursors by 60,000 tons

Preemptive facility improvement

EWP reduced air pollutant concentrations by 15% year on year by improving desulfurization and de-nitrification facilities. Furthermore, EWP improved the shapes of desulfurization facilities and resolved the blockage issues, and increased the reactivity by improving the types of denitration catalyst facilities.

Improvement of environmental prevention facilities and performances

Air Pollutants	Issues	Improvements	Performances
Sulfur oxides	Blockage of the heat exchanger and frequent corrosion	• Improved the shapes of desulfurization gas heat exchanger (Former) Thermal double wave patterns ➞ (Present) Single wave patterns, gap expansion • Strengthened quality of desulfurization gas stage reheater structures (Former) Steel+ low alloy steel ➞ (Present) High alloy steel	• Reduced sulfur oxides through prevention of degradation (24ppm ➞ 21ppm) • Ensuring credibility of operating heat exchangers through quality improvement
Nitrogen oxides	Blockage of denitration catalysts and instability of combustion	• Increased reactivity of denitrification chemicals by improving the type of denitrification catalysts (Former) Hive-shaped catalyst ➞ (Present) Applied flat-surfaced catalysts • Prevented denitrification catalysts' blockage by capturing large amount of ash	• Reduced emission of nitrogen oxides (73ppm ➞ 63ppm) • Ensured credibility of operating denitrification facilities

Early reduction strategy

By moving forward the performance improvement work by five years, which is supposed to be conducted 25 years after the completion of power plant construction, EWP plans to reduce fine dust precursors by 60,000 tons.

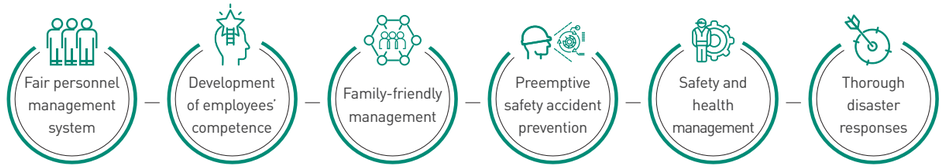
MATERIAL ISSUE

04 HAPPY AND SAFE WORKPLACE

EWP is raising the value of its employees based on respect for humanity, that is care and safety. It is a prerequisite for the growth of EWP to create a culture of respect for each other and improve the quality of the safety of employees through work-life balance. EWP also recognizes that it has the responsibility of ensuring the safety of its employees and business partners, as well as the safety of local communities through a preemptive and thorough safety management.

OUR STRATEGY & EFFORTS

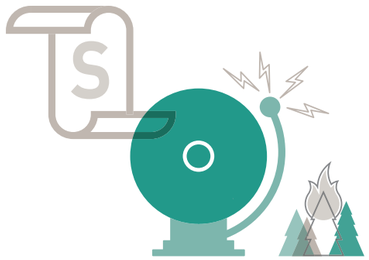
To create a happy workplace, EWP is practicing management that respects humanity promoting fair personnel management, competency enhancement training and cooperation between labor and management. In addition, it is pursuing a family-friendly management that can help employees maintain healthy work-life balance so that they can enjoy a happy family life. In addition, to protect the safety of its employees, EWP is preemptively preventing disasters and safety accidents that may arise in its power plants, and conducting safety and health management to support employees' health maintenance and create a safe working environment.



OUR PERFORMANCES

Disaster Response and Safety Drill for four consecutive years

S grade



No. of employees who have participated in education and training

increased by 30% year on year

38,586 people

No. of employees who have utilized flextime

increase by 16.1% year on year

812 people

Total average score of safety culture maturity

entered Level 4

4.03 points

FUTURE PLANS

INTERVIEW

Many of the workers at power plants consist of partner companies' employees. Ten-year statistical data on safety accidents show a high rate of such accidents among partner companies' employees. EWP is devoted to securing the safety of the employees by entrusting industrial safety management to external professional organizations. Above all, to provide sufficient information on safety and enhance safety consciousness, it has created and screened videos on the five major safety regulations that emphasize the compliance with basic rules.

In addition, EWP supports regular health check-ups, disease and stress prevention education for employees' basic health management, and assesses the risk factors in the working environment to strengthen safety in daily life. As part of national infrastructure, a public energy company's power plants should preemptively respond to various disasters such as natural disasters and terrorism, and should exert special efforts to prevent secondary accidents including problems in national energy supply. EWP has striven to prevent disasters by applying the higher standards than those recommended by the government, to earthquake-resistant design, sensing facilities and other anti-disaster measures. On the other hand, as part of post-disaster response measures, it is carrying out comprehensive disaster drills for all employees to ensure rapid information dissemination and evacuation capabilities.

EWP will do its best to take responsibility in ensuring a happy life for each employee and their families, and keep aiming at an accident rate of 0%, by upgrading the disaster safety system based on ICT.

Kim Jong-ha

Deputy General Manager
Disaster Management Team, EWP

Happy Workplace

Employing fair recruitment and personnel management system, EWP is creating a working environment free of discrimination. It is also continuously developing and operating a system to raise the quality of the life of its employees, thereby increasing their satisfaction level of the welfare system.

Fair Personnel Management System

Capacity-centered employment

EWP manages its personnel management process based on NCS levels. Job descriptions and recruitment criteria are disclosed to the public at the time of recruitment, and information with low relevance with demanded jobs, such as applicants' photographs, education background, overseas training experiences, etc. is not required to be provided in the application form. In addition, unfair applicants are excluded from hiring, and their application forms are returned to them to maintain a thorough and fair capacity-centered employment system.

17% higher local employment rate than the targeted rate

Socially equitable employment

EWP classified the groups depending on their gender, educational levels, local talents and the disadvantaged, and set out goals for each group. In 2016, EWP exceeded the goals for each group, while it achieved a 17% higher rate than it intended in the local employment.

Socially equitable employment system

Employment goals / Employment results

Category		System and efforts to achieve the goals	Employment goals and results
Women		· Implementation of employment quota system for gender equity · Employment in favor of women on a career break, etc.	15% 23.6%
High school graduates		· Separate recruitment processes (to prevent college graduates from applying for the jobs requiring lower level of education)	20% 20.3%
Local talents	All applicants	· Expansion of employment quota system and continuous implementation of the "College Students' Energy Job Search" program	35% 52.1%
	Relocated region	· Preferential employment	10% 12.1%
The disadvantaged	Disabled	· Separate recruitment process · Preferential employment	3% 3.4%
	Employment support		9% 9.4%

Women with time-selective jobs Unit: persons

Employment of women on a career break

EWP supports women on a career break by discovering the jobs suitable for a flexible working hour system within the scope of 40 hours a week. With the revitalization of the employment system for women on a career break, the number of EWP's female workers in jobs with flexible working hours more than doubled from 7 in 2014 to 20 in 2016.

Prevention of discrimination based on education level

EWP selects applicants through NCS-based competence assessment and criteria for determining promotions, and salary grades ensure fairness as they have reasonably differentiated requirements between high school graduate and college graduate employees. Also, EWP is supporting high school graduate employees in their entrance into colleges or the in-house college to enhance their competitiveness.

Development of Employees' Competence

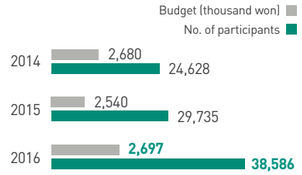
Strengthening capacity by position

EWP institutionalized leadership training for senior managers as a regular program. Establishing reading management integrated support system, EWP was certified as a workplace with excellent reading management by the Ministry of Culture, Sports and Tourism for two consecutive years.

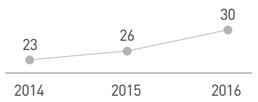
Leadership training system for senior managers

Previous training system		Organization's needs	Leadership training for senior managers (regular program)
Senior managers	Employees eligible for promotion		
· Carried out on a one-time basis for specific issues	· Job grade 1: one-on-one coaching, group training · Job grade 2: one-on-one coaching, group training, e-learning · Job grade 3: group training, e-learning	The new climate regime in effect ↓ Need for future business leaders ↓ Need for leadership of senior managers	Leadership training institutionalized into a regular program for those at job grades 2 to 3 with four to six working years: Sensibility, integrity, transformational leadership → training satisfaction level of 99%

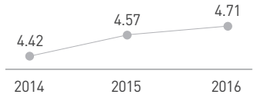
Annual training results



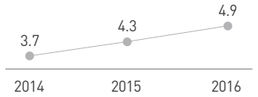
Women eligible for promotion Unit: persons



Female employee capability index Unit: points



Proportion of female managers Unit: %



Improvement of competence development training

EWP restructured its educational organization into three departments to secure educational infrastructure; it also encouraged the training staff to obtain the qualifications of human resource managers and participate in the 2016 ATD International Conference and Exposition. In addition, through a mandatory annual survey on the entire curriculum, the evaluation and feedback of trainees are reflected in training for improvement. As of 2016, the training period per employee is 211 hours, 4.5 times longer than that of Korean public institutions. The overall employee competence index score amounts to 4.76 points, which is increasing for the third straight year.

Female manager fostering system

Aiming at 6% of women among all managers, EWP has established the four areas of personnel management as below.

Fourareas of personnel management to foster female managers

[Recruitment] Ensuring the pool of potential female leaders	[Promotion] Giving more opportunities for women
· Employment quota system: more than 15% of newly recruited persons · Continuous increase in women among the eligible for promotion (from job grade 3)	· Requirement to set priority for promoting senior managers · Reduction of requisite period for promotion: priority for women
[Training] Support for the fostering of female leaders	**[Work-family balance] Creation of motherhood- and family-friendly culture**
· Competence enhancement training for 32 female managers (at job grade 3 or higher) · Training to foster 54 female leaders for EWP future leadership	· Lucky 7 Time-Out (Automatic lights-out system to encourage employees to leave the office on time · Three years of parental leave · Increase in daycare centers: 1 → 2 (Dangjin, Ulsan)

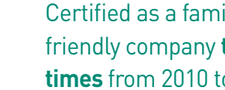
Family-Friendly Management

Improvement of flextime

EWP shortened the minimum interval for flexible commute time, from a weekly basis to daily basis, and increased the efficiency of telework through the use of a cloud system. Also, it has diversified the types of the flextime introducing the four-day workweek, which is a compressed work system reducing working days. As a result, the number of employees using the flextime has increased to 812, which is up by 16.1% from the previous year.

Satisfaction level of flextime operation in 2016: **90** points

No. of employees who have utilized flextime Unit: persons



Flextime operation results

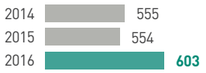
Working Type	Definition
Flexible commute time	Working 8 hours a day and commuting at desired times
Flexible work hours	Working 5 days a week at desired hours a day, instead of fixed 8 hours, within the scope of 40 working hours a week.
Compressed work schedule	Working 3.5 to 4 days a week, and 10 to 12 hours a day
At-home work	Working at home instead of the office
Smart work	Working in other office spaces, such as a nearby Smart Work Center

Priority given to employees' rest

To create a culture that prevents any disadvantages to the employees who want to take rest or leave, EWP has received a pledge on the efforts to lead such a culture from all employees. In addition, by collecting and reflecting opinions from employees about leaves in the system, the number of employees who have taken extended leave increased by 49 persons from the previous year.

Employees' satisfaction level of the welfare system in 2016: **85** points

Employees who have taken extended leave Unit: persons



Employees' opinions and feedback on improvement of the leave system

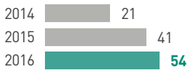
Employees' opinions	Changes in the system
Rest more than pay	· Introduction and operation of compensation leave system (100% compensation for overtime work)
Necessity of an extended leave	· Annual leave carried over to the next year (leave saving system)
Application for a leave without concerns about disadvantages	· Deletion of the reason ffrom the application form · Internal evaluation of leave usage rates, and the results reflected in the KPI assessment for each team leader

Childcare support system

EWP has developed the Easing MOM (mind of mother) Package as a phased-support system to help mother workers during the periods of their pregnancy, childbirth and childcare. In addition, it has secured the workforce that will replace mother workers who take time off.

Certified as a family-friendly company **three times** from 2010 to 2018

No. of employees who have taken parental leave Unit: persons



Easing MOM (mind of mother) Package

Stages	Pregnancy →	Childbirth →	Childcare
Systems	· Shortened working hours for pregnant workers · Leave for regular fetal checkups	· Before and after childbirth leave	· Parental leave, and shortened working hours for parents with young children · Part-time and at-home work
Welfare Benefits	· Baby shower	· Naming service for a newborn · Childbirth gift in money	· Workplace daycare center

Safe Workplace

Ensuring a safe workplace is one of the top priorities in the sustainable management of EWP. It is committed to creating a stable working environment through preemptive safety accident prevention, safety and health management activities and thorough disaster responses.

Preemptive Safety Accident Prevention

Safety management by maintenance skill level

EWP has standardized the safety management for short-term workers, which had been carried out by its business partners, into a new safety management system tailored to the maintenance skill levels of each worker. In this system, field workers are classified into new workers with little maintenance experience, the less skilled with a career shorter than 100 days and the skilled with a career longer than 100 days. Each group is provided with vests in different colors, and various tasks ranging from simple repair to more important ones such as cost down operation are assigned to workers in each group, depending on their skill level. In addition, this system requires additional safety training at the workplace as well as legally mandatory ones, thereby raising safety consciousness.

Number of safety accidents Unit: cases

Strengthening of overhaul safety management

EWP has improved its guidelines for overhaul* safety management to strengthen the safety management for its employees and the workers of its business partners. Based on a statistical analysis on past safety accidents that showed a relatively high occurrence rate of safety accidents during overhauls (44.5%), it has revised its previous guidelines to give priority to "safety" in the process of an overhaul. In a case that any failure of devices is detected through the inspection of witness points** by supervisors, the process is discontinued under the new guidelines. This has contributed greatly to the decrease in the number of accidents: only three accidents occurred in 2016, which is down 75% compared with 2015.

* A regular inspection and maintenance carried out to maintain the performance of generators; prevent the failure of various devices; and enhance the reliability and performance of equipment
** Identified points in the process of work that supervisors may inspect and review

Strengthening of on-site safety communication

A TBM (Tool Box Meeting), where work plan and safety precautions are shared prior to the commencement of work, is conducted in different ways depending on each business partner and as a mere formality. To ensure that the importance of TBMs is not overlooked, EWP has standardized the process of a TBM in the order of risk inference, announcement and sharing, work implementation and a closing meeting, while strengthening the provision of feedback by requiring a report in the case of insufficient response to an accident. This has contributed to active communication on the field conditions among workers and the enhancement of the awareness of safety accidents.

▲ On-site inspection of generating units

Safety and Health Management

Accident rate of EWP contracts in 2016: **0.19**%

Communicative safety management

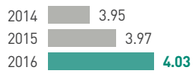
EWP's executive members direct construction during high-risk work in the process of overhaul and participate in TBMs to strengthen communication about safety. In addition, EWP has shared safety management measures and raised awareness of safety through a CEO-led forum on safety with business operations and partner companies, and a joint CRO-led workshop for the personnel in charge of safety in EWP and partner companies. As a result, the accident rate of EWP contracts* was only 0.19% in 2016, which exceeds the year's goal by 63.5%.

* Accident rate of EWP contracts: The proportion of disaster victims per 100 employees

▲ EWP executives participating in safety and health management

Evaluation of safety culture maturity level

Maturity level of safety culture — Unit: points



EWP has used LSCAT* for the assessment of safety culture maturity levels of the employees at job grades from 2 to 4 in nine areas, including participation rate. In 2016, the overall average maturity score rose to 4.03, increasing by 0.06 points compared with the previous year and indicating the level of "mutual safety." In this year's safety culture maturity assessment, EWP achieved relatively high scores corresponding to the level of advanced companies in the categories of "the recognition of necessity, priority given to safety and the support of the management." In the categories of "safety task participation and support," the scores were higher compared with the previous year.

* LSCAT: a safety culture assessment tool jointly developed by the UK Health and Safety Executive (HSE) and the Centre for Hazard and Risk Management, Loughborough University

Safety and health activities for employees

EWP provided CPR training to enhance the capacity to respond to emergencies in the workplace, and healthcare professionals at each business operations offer personalized health management programs. In addition, by organizing personalized counseling and health management plans for each disease and holding experts' lectures on the healthy lifestyle, it seeks to raise employees' awareness on health. In addition, as part of the Three Zero Workplace Project that aims at a workplace free of smoking, obesity and stress, EWP supports basic health check-ups, mental health care and exercise programs.

▲ Lectures by health experts

▲ Exercise program support

Thorough Disaster Responses

Reinforcement of response system to cope with accidents in power plants

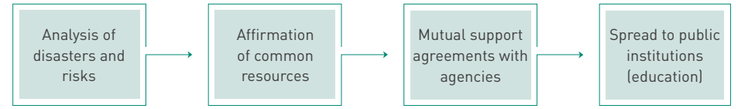
EWP has reinforced the CCTV surveillance system for disaster prevention with a total of 849 CCTVs in operations, which are monitored and managed by both the headquarters and the business operations. In addition, by reinforcing the monitoring of hazardous facilities with the extended scope of monitoring of toxic chemicals and hazardous material storage facilities, it preemptively responds to accidents. Furthermore, EWP plans to improve the fire monitoring system operated by manpower into an automatic fire detection system and gradually expand it to all business opeations from 2017.

S grade in the Disaster Response and Safety Drill for **four consecutive years** (2013-2016)

Joint response system to cope with accidents around power plants

EWP has become the first power company to set up a joint use and management plan for disaster control resources in cooperation with the Ministry of Public Safety and Security and build a response process to cope with major accidents. In addition, Dangjin Coal-fired Power Plant signed a business agreement with the Seosan Joint Inter-Agency Chemical Emergency Preparedness Center, Ulsan Oil-fired & C.C Power Complex concluded mutual support agreements with six companies including SK Gas. In addition, it established a public-private partnership system that supports fire trucks and an independent fire brigade for first responses in case of accidents, and strengthened this cooperation system through periodic joint training. With these efforts, EWP received a grade of S in the Disaster Response and Safety Drill for for four consecutive years.

Stockpile resource management of disaster control resources



Achieved the safety certification of all the resident partner companies

Support for business partners' safety management

EWP supports its business partners in the acquisition of the KOSHA 18001 certification. It has supported the achievement of the certification of four partner companies including that of Dangjin Coal-fired Power Plant and Geumhwa PSC, thereby completing the certification process of all the resident partner companies of EWP. In 2016, it provided the certification examination fee to its new business partner in Ulsan.

Strengthening response to earthquake

EWP expanded the earthquake alarm and status update service to be provided to its business partners as well as all employees. Also, EWP strengthened the standards for its earthquake response process to be undertaken at the magnitude of 3.0. In addition, the one-phase earthquake response training was upgraded into the two-phase one from May 2016, and since the same year, EWP has reinforced earthquake resistance of its buildings by entrusting the establishment of seismic design standards to an outside service provider.

▲ Disaster Response and Safety Drills

MATERIAL ISSUE

05 WIN-WIN GROWTH WITH BUSINESS PARTNERS

As the domestic electric power industry market gradually becomes saturated and new industry trends form, EWP needs firm support from its business companies to achieve sustainable growth. Also, helping partner companies fully exert their capabilities is essential for the growth of the national economy and the local community as well as the growth of EWP. The stable growth of SMEs is soil and a base where a healthy corporate ecosystem can take root and grow. That is why EWP wants to create a culture of coexistence with its business partners pursuing win-win growth.

OUR STRATEGY & EFFORTS

EWP is committed to fostering globally strong SMEs under the CEO's philosophy that places emphasis on mutual growth with SMEs. It has provided systematic support through a dedicated task force for the win-win growth and taken the lead in supporting the R&D of SMEs for the manufacturing of excellent SME products. Also, EWP's program to assist export starter companies and Power Silk Road Project have been carried out to support its business partners in pioneering overseas markets so that they grow into leading export companies.

OUR PERFORMANCES

First public enterprise

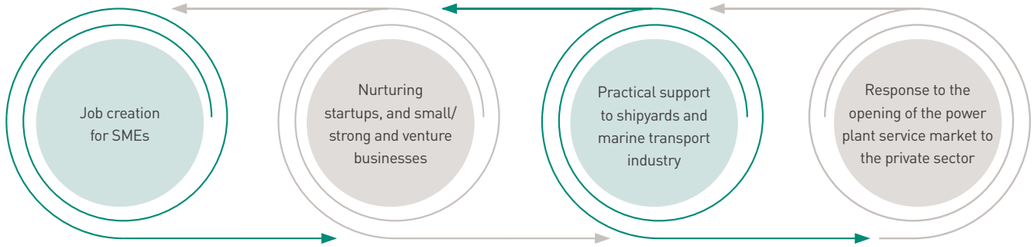
to have ever established a win-win consultative group with marine equipment manufacturers

Domestic products replacing imported ones in power generation facilities
as of 2016
83 %

Exports of SMEs participating in EWP's overseas market pioneering support project
1.2 trillion won

Won the Award of Best Project Discovery for ten consecutive years
10 years

FUTURE PLANS



INTERVIEW

APEC has enjoyed an opportunity to cooperate with EWP in supplying optimal power generation facilities such as Dangjin Small Hydro Power Facility Unit 2 and Bukpyeong Marine Power Facility for the past seven years. In particular, EWP allowed us to use Dangjin Coal-fired Power Plant as a demonstration complex to verify our technology through an agreement on test-beds for SMEs' self-developed products. Furthermore, EWP issued us a certificate for the verified technology in the name of EWP's CEO. This helped us successfully pioneer domestic and overseas markets and gain the opportunity to generate new sales profits, and the securing of our own products also led to job creation.

In January 2017, APEC joined the EWP project to develop a project management system (PMS) for energy storage devices to stabilize the output of marine power plants. This task for the development of a battery that can store and produce power using infinite seawater is expected to secure power quality of new and renewable energy such as tidal power.

APEC hopes that EWP will maintain its active technology-intensive and strategic partnership alliances with SMEs so that they can continue to participate in such domestic and international projects and research. We will do our best to grow into a strong partner in engineering and overseas business for EWP, as well as to contribute to the sustainable growth of the local community through this partnership.

Simon N. Paik

CEO and President
Asian Power & Energy Corp.

Enhancing Value with EWP

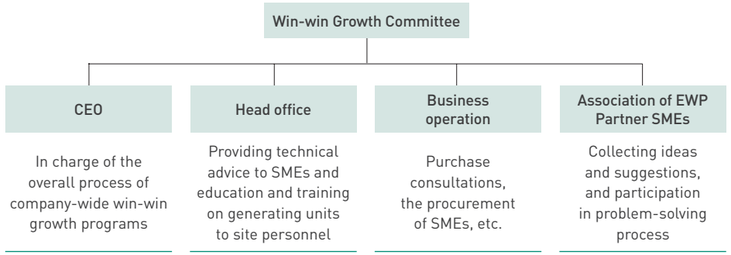
EWP has built the Win-win Growth 4.0 model to reflect CEO's willingness to grow together with business partners. It will devote itself to enhancing the corporate values of its business partners by focusing on the major four tasks of the model: Fostering Total Solution Providers, expanding high value-added R&D, operating the EWP Win-win Growth Energy Valley and operating the New Export Platform led by SMEs.

Systematic Management of Win-win Growth

Organizations for win-win growth

The Win-win Growth Center has a system that can pursue win-win growth with SMEs mostly in the areas of R&D, engineering and construction technology. In addition, to establish and implement practical measures to accomplish such growth, EWP has run the Win-win Growth Committee composed of the CEO, the head office, business operations and the Association of EWP Partner SMEs. The committee supports EWP's company-wide win-win growth programs such as the provision of technical advice, education and training on generating units and the procurement of SMEs' products, thereby contributing to the growth of SMEs.

Organization and Roles of the Win-win Growth Committee



Practical tasks for win-win growth

Through the surveys conducted with EWP employees and 132 partner SMEs, EWP extracted five practical tasks to accomplish win-win growth: expanding the purchase of SMEs' products, supporting the development of joint R&D projects, expanding the support for overseas exporting, strengthening competitiveness of SMEs, and building infrastructure for win-win growth. In addition, EWP established the goals of each task and performance indicators to evaluate the efforts of fulfilling these tasks.

Practical Tasks for Win-win Growth

Budget for win-win growth support KRW **27.5** billion

Task performance included in the employee evaluation indicators

EWP rewards employees' achievements based on the results of assessment using the win-win growth task performance indicators such as strengthening competitiveness of SMEs, expanding the purchase of SMEs' products and expanding high-value-added joint R&D projects. This leads to the enhancement of the employees' consciousness of win-win growth and the rise in their willingness to accomplish related tasks. In 2016, EWP actively pushed forward with its goals for win-win growth with a budget of KRW 27.5 billion, which increased by KRW 5.6 billion over the previous year.

Sustaining SMEs' Competitiveness

Support for the demonstration and commercialization of SMEs' products

EWP invested KRW 950 million in the project and held a demonstration session of SMEs' products twice during the first and second half, respectively, helping them find markets for the verified products. In 2016, it awarded certification of performance to the SME products verified through demonstration of 18 cases and from 2011 to 2016, it purchased excellent certified SME products worth KRW 25.6 billion. The SMEs that participated in the project created new revenues of KRW 94.5 billion through the commercialization of their products.

Process of the power plant demonstration support project

Localization rate of power generation facilities Unit %

Increase in localization rate of power generation facilities

To help domestic companies in their development of equipment, EWP has identified the imported equipment used in its power plants that can be replaced by domestic products while leading high-value-added R&D for the increase in the use of domestic products in power generation facilities. With this, EWP has established an initiative for the expansion of R&D for the use of domestic products to secure the technological competitiveness of EWP and SMEs. As a result, 83% of the existing imported products in the power generation facilities were replaced by domestic products as of 2016. This also led to a cost saving of KRW 8 billion.

An R&D cooperation fund of KRW **17.2** billion

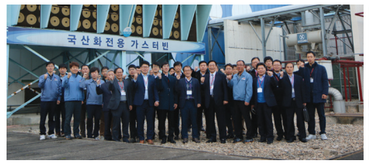
Expansion of joint R&D with SMEs

EWP has selected 4 core research tasks such as the replacement of foreign products with domestic ones, new product development, new convergence technology, new business and new and renewable energy. It has also simplified the procedures needed for joint R&D applications and lowered the level of required arrangement from a contract to an agreement to ease the burden on SMEs. In addition, EWP discovered a total of 140 research projects from 2005 to 2016 with the establishment of a research and development cooperation fund of 17.2 billion won, which led to its winning of the Award of Best Project Discovery at the 2016 Innovative Technology Show for nine consecutive years.

Localization rate of gas-turbines **78%** (Saving KRW 11 billion)

Introduction of gas-turbines designed for the use of domestic parts

EWP has replaced the imported parts of the gas-turbines at its LNG power plants with the domestic ones. In particular, Ilsan Combined Heat & Power Plant has operated a gas-turbine designed for the use of domestic parts to promote the commercialization of SMEs' products. In addition, it has held an R&D technology exchange meeting and shared technology development cases for SMEs. The usage rate of domestic parts for the gas-turbines at EWP's power plants increased from 56% in 2012 to 78% in 2016, resulting in a saving of KRW 11 billion in maintenance costs for foreign-made parts.



▲ Gas-turbine designed for the use of domestic parts at Ilsan Combined Heat & Power Plant

▲ Agreement on the power plant demonstration support project

Strengthening Core Competencies of SMEs

Support for entrance of marine equipment manufacturers into power generation market

Purchase of business partners' products worth KRW **1.52** billion

EWP is systematically supporting its business partners by establishing a roadmap for the entry into the power generation market, and it is also cooperating with related local agencies in various ways through a win-win consultative group with marine equipment manufacturers. In addition, EWP has invested KRW 5.65 billion in R&D for supporting its business partners in their advancement into the power generation market, while purchasing their products worth KRW 1.52 billion.

Industry Innovation Movement 3.0 for building a growth ladder for SMEs

Participation of 80 companies and achievements worth KRW **3.56** billion

EWP has led Industry Innovation Movement 3.0 to help SMEs improve their working environment and operating systems. It has attempted to to support them in three areas: innovation of manufacturing condition, innovation of production management technology and smart factory implementation. A total of 80 companies have participated in Industry Innovation Movement 3.0 from 2013 to 2016, achieving financial performance worth KRW 3.56 billion in financial performance.

Strategies and support for Industry Innovation Movement 3.0

Establishment of business plan	Recruitment of SMEs	Conclusion of agreements	Performance analysis
· Growth of SME business partners · Reflection of productivity innovation	· Companies with great growth potential · Companies with excellent R&D capability	· Production site innovation · Production management technology · Smart factory implementation	· KPI improvement rate · Financial performance analysis

Win-win Supporters for nurturing startups and venture businesses

EWP is operating the Win-win Supporters Program in order to revitalize the regional economy by strategically fostering startups and venture businesses. In cooperation with six organizations including the Ulsan Metropolitan Government and the Small & Medium Business Administration, EWP is endeavoring to develop 90 startups and venture businesses as small hidden global champions. In particular, EWP and the Ulsan Metropolitan Government raised a total of 9 billion won for funds by investing 1.5 billion won, which is the largest investment among public organizations. In consideration of the business features of startups and venture businesses, EWP established the supporting process, focusing on consulting, technical support and market support. In 2016, it found 35 startups and venture businesses with strong growth potential in Ulsan.

Supporting process of win-win supporters

Consulting support: KRW 1.9 billion	Technology support: KRW 4.0 billion	Support for market opening: KRW 3.1 billion
· Expert advising on the export market · Local legal and accounting consulting · Establishment of step-by-step export strategy	· Provision of overseas test-beds · Acquisition of overseas standard certification and recognition · Localization of products	· Support for vendor registration · Overseas exhibitions and export consultation · Market pioneering groups · Support for export activities through local agents

Support for SMEs' Overseas Market Opening

Power Silk Road Project for supporting overseas market opening

Achieved USD **19.52** million contracts through new market opening

EWP is carrying out the Power Silk Road Project, which supports its business partners with the process of vendor registration, finding overseas buyers and understanding overseas markets. It has conducted a questionnaire survey on overseas advancement for 150 power generation equipment manufacturers to establish a support system tailored to their overseas expansion, and concluded agreements with KOTRA, national agents and export councils to diversify its support for SMEs' overseas markets. This led to contracts worth a total of USD 19.52 million from newly pioneered markets in India, Southeast Asia and the Middle East.

Roadmap for EWP Power Silk Road Project

Export leading companies	Nurturing EWP Power Silk Road enterprises
New platform for abroad export	EWP: Support export fees + KOTRA: Management of export tasks Southeast Asia / China / Middle East / India / CIS*
Selection screening	Selection of 5 companies
Export promising companies	Pool of global competent companies (companies with Solution Provider)
	Support for growth
Export starter companies	Pool of Export starter companies (2nd, 3rd partners of local SMEs and marine equipment companies)
Support for growth	R&D support → On-site verification → Direct purchasing → Market opening support

* Commonwealth of Independent States

Cooperation with related organizations

Exports of participating companies amounting to KRW **1.2353** trillion (up by 25.5% from the previous year)

To provide practical support to partner companies in their market pioneering, EWP cooperates with other power generation companies in organizing overseas energy exhibitions and export conferences inviting overseas buyers. In addition, EWP has also hosted field-trips to Vietnam buyers' power plants and export conferences, including purchase consultation for invited Indian buyers in cooperation with KOTRA, contributing to its business partners' active overseas market pioneering. In 2016, 57 companies participating in the New Export Platform Project achieved exports totaling KRW 1.2353 trillion, which increased by 25.5% compared with the previous year.

Support for advancement into EWP's overseas business Operations

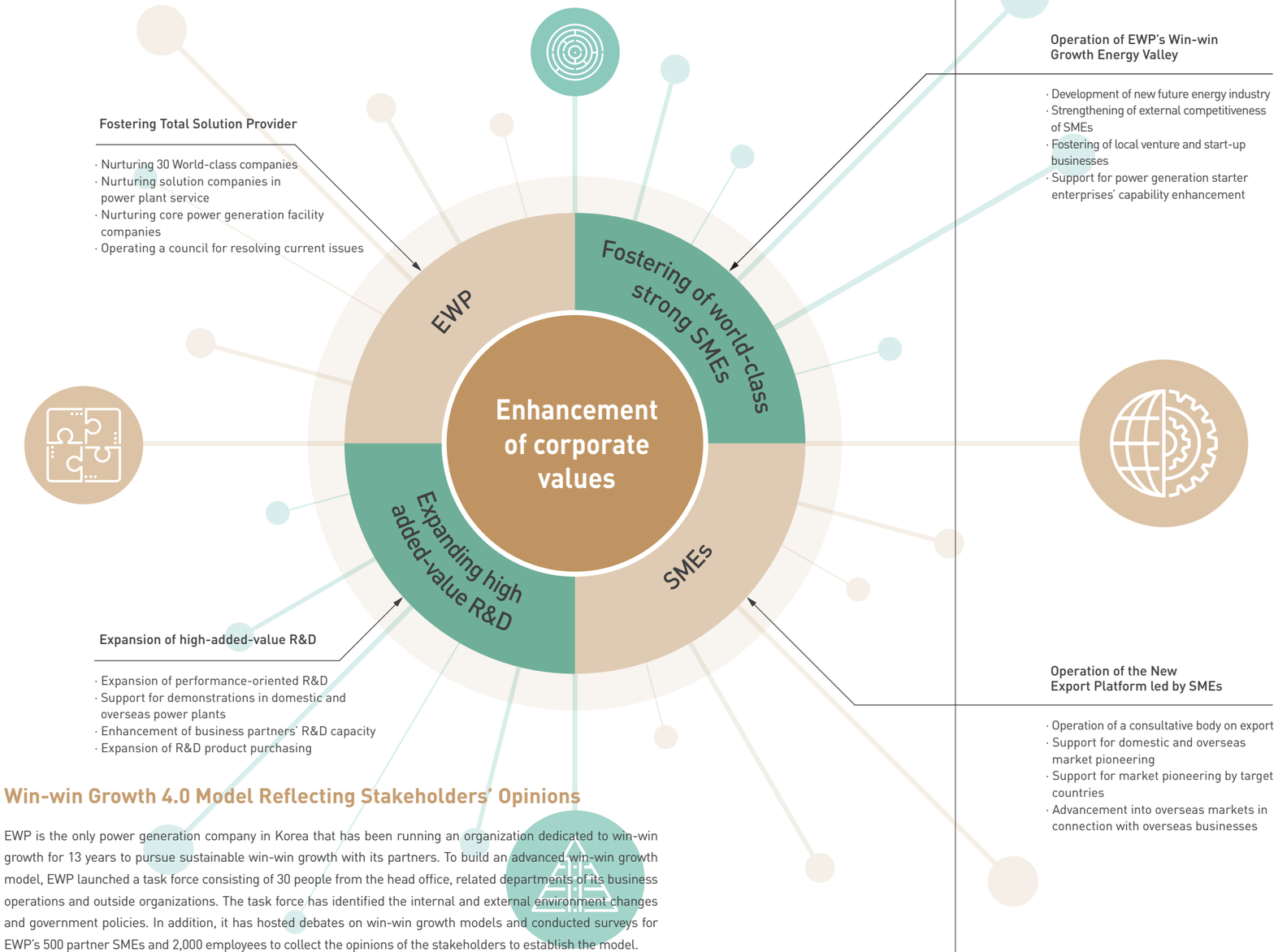
Exports totaling USD **1.6** million to Indonesia and the U.S.

EWP is promoting the use of SMEs' products in its four overseas power plants. It uses SMEs' successful R&D products in these overseas business operations and provides local bidding information to help SMEs advance into overseas markets. In addition, it holds seminars for 83 partner SMEs on strategies for overseas market opening, while supporting registration as global EPC* companies and certification acquisition fees; and operating Win-win Growth South Asian Office, to lower the barriers to overseas market entry. These efforts led to simultaneous advancement into Indonesia and the U.S. in 2016, which resulted in exports totaling USD 1.6 million.

* EPC (Engineering Procurement Construction): a form of project where a contractor who won a large-scale construction contract or an infrastructure contract is responsible for all the activities from design to procurement of parts and material, to construction.

Special Issue

03 Establishment of the Win-Win Growth 4.0 Model



Fostering Total Solution Provider

- Nurturing 30 World-class companies
- Nurturing solution companies in power plant service
- Nurturing core power generation facility companies
- Operating a council for resolving current issues

Operation of EWP's Win-win Growth Energy Valley

- Development of new future energy industry
- Strengthening of external competitiveness of SMEs
- Fostering of local venture and start-up businesses
- Support for power generation starter enterprises' capability enhancement

Expansion of high-added-value R&D

- Expansion of performance-oriented R&D
- Support for demonstrations in domestic and overseas power plants
- Enhancement of business partners' R&D capacity
- Expansion of R&D product purchasing

Operation of the New Export Platform led by SMEs

- Operation of a consultative body on export
- Support for domestic and overseas market pioneering
- Support for market pioneering by target countries
- Advancement into overseas markets in connection with overseas businesses

Win-win Growth 4.0 Model Reflecting Stakeholders' Opinions

EWP is the only power generation company in Korea that has been running an organization dedicated to win-win growth for 13 years to pursue sustainable win-win growth with its partners. To build an advanced win-win growth model, EWP launched a task force consisting of 30 people from the head office, related departments of its business operations and outside organizations. The task force has identified the internal and external environment changes and government policies. In addition, it has hosted debates on win-win growth models and conducted surveys for EWP's 500 partner SMEs and 2,000 employees to collect the opinions of the stakeholders to establish the model.

Enhancement of Enterprise Values through the Win-win Growth 4.0 Model

EWP named its newly developed Win-win Growth 4.0 model as "Value Enhancement with EWP," which includes the meaning, "EWP makes you happy." Then it established the four strategic tasks and the 16 practical tacks aiming at the enhancement of enterprise values. In June 2016, EWP held a launching ceremony for the Win-Win Growth 4.0 model inviting the Ministry of Trade, Industry and Energy, Large & Small Business Cooperation Foundation, Korea Council of Medium Industry and EWP's employees, to show the willingness of the management to promote win-win growth with SMEs. In addition, it organized the Association of EWP Partner SMEs and consultative bodies on R&D and export, in order to boost its effort to implement the model.

Establishment of a Mid and Long-Term Roadmap for Win-win Growth

Pursuing the Win-win Growth 4.0 model, EWP is implementing a roadmap for the globalization and independence of its business partners, after the process of building foundation and enhancing their capacity by 2025. EWP plans to carry out 250 R&D projects; discover 80 R&D companies; and accomplish KRW 1 trillion in exports of partner SMEs by 2030, to ultimately create 100 Total Solution Provider companies.

Win-win Growth 4.0 Model Roadmap

Core tasks	STEP 1. 2016 ~2020	STEP 2. 2021 ~2025	STEP 3. 2026 ~2030
Fostering Total Solution Providers	10 companies	50 companies	100 companies
Expansion of performance-oriented R&D	180 projects	200 projects	250 projects
Establishment of the EWP Win-win Growth Energy Valley	40 companies	60 companies	80 companies
Operation of the New Export Platform led by SMEs	250 billion won	500 billion won	1 trillion won

Employees · Electric Power Corporations · National and local governments · Business partners · Local residents · Environmental Organization

MATERIAL ISSUE

06 Happy Growth with Local Communities

What completes a company's sustainable growth is the support and interest of the local community. Therefore, EWP actively communicates with the local community and carries out social contribution activities to meet its needs. Using the characteristics and expertise of the power generation industry and discovering and faithfully performing its unique role in the community, EWP participates in sharing activities and contributes to local economic growth.

OUR STRATEGY & EFFORTS

EWP implements the social contribution program, "Happy Energy Dream," to become a trusted energy company that fulfills its social responsibility through the practice of sharing. It transforms the conflicts with the local community into opportunities, pushes forward with strategies to grow with the residents, and spreads a culture of co-prosperity and sharing, by reflecting the characteristics of EWP and the region in its activities. To effectively conduct social contribution projects, EWP conducts evaluation and reflects feedback in the plans. Also, through the discovery of future projects and cooperation with SMEs, it continues to create quality jobs.

Implementation for Social Contribution — Win-win development with local communities — Spread of a culture of sharing — New job creation system and achievements — Quality jobs linked to future business — Jobs for win-win growth

OUR PERFORMANCES

AAA
Top rating
KoBEX SM
Korean Business Ethics Index
Sustainability Management
for nine consecutive years

No. of households benefited from EWP's energy welfare programs for the disadvantaged
1,613 households

No. of newly created jobs
106% up from the previous year
14,133 jobs

Donation for the restoration of damages caused by Typhoon Chaba
265 million won

FUTURE PLANS

Expanding the scope of volunteer services, and planning and execution led by each department
→ Facilitating projects for the resolution of conflicts
→ Increase in social problem-solving projects
→ Establishment of eco-friendly energy welfare projects

INTERVIEW

EWP has actively participated in the cultivating of human resources to improve the rights of social workers in Ulsan. This has also contributed to the improvement of social services for beneficiaries including the disadvantaged. EWP has provided its auditorium for the annual Social Workers' Conference that is held to enhance the self-esteem of more than 2,000 social workers in the Ulsan area, and the employees of EWP have participated in the social worker training as speakers. It is very meaningful that EWP, a company based in Ulsan, is supporting and encouraging social workers of the city.

For corporate social contribution, it is important that the company and the beneficiaries of services are well matched so that the former can meet the latter's specific needs. EWP actively supports small traders as one of its social contribution activities by encouraging all employees to visit traditional markets during the holiday season and purchase many goods. When Typhoon Chaba struck Ulsan in 2016, EWP quickly recovered the electricity facilities in the affected areas and also participated in the blood donation campaign in the city. These are some examples that illustrate EWP's continuous efforts to find and meet local needs.

I hope that the EWP's Committee for Social Contribution will be launched as soon as possible so that many social groups can work with EWP under a more systematic system.

Kim Bok-hui

Secretary-General
Ulsan Association of Social Workers

Happy Sharing and Growth

EWP is committed to growing together with its local communities through sharing. EWP actively communicates with the local community and contributes to the society based on the characteristics of the power generation industry to create a culture of coexistence.

Implementation System for Social Contribution

Strategies for Social Contribution

EWP strives to become a public institution that is trusted by local communities through community-based social contribution activities. It has set three strategic tasks for social contribution—resolving conflicts, win-win growth with local communities, and spread of a culture of sharing—and established a system for company-wide fulfillment of social responsibilities under which volunteer activity is reflected in employee evaluation for promotions.

Implementation System for Social Contribution

Mission	We Make Energy for Happiness		
Vision	A trusted energy company that fulfills its social responsibilities through sharing		
Brand	Happy Growth with Local Communities through "Happy Energy Dream"		
Strategic tasks	Social contribution to resolve conflicts	Win-win development with local communities	Spread of a culture of sharing
Implementation system	· Inclusion in internal evaluation indicators · Operation of a mileage system that rewards volunteer activities · Rewards to teams and individuals with excellent volunteer activity engagement · Reflecting volunteer activities in promotion evaluation		

Operating the volunteer team **140** teams, **2,300** employees

Organization and management system for social contribution

EWP operates a social contribution organization and management system for strategic social contribution activities. It has formed a social contribution volunteer team consisting of 6 branches, 140 teams and 2,300 employees, and the collaboration with welfare centers and public institutions enhanced the expertise of EWP's social contribution projects. At the same time, it strives to encourage employees to participate in social contribution activities through reward and mileage systems for teams and individuals with excellent volunteer activities.

Evaluation and Improvement of Social Contribution Projects

EWP has evaluated the social contribution projects that are currently being carried out by its employees. The needs of internal and external stakeholders were analyzed through surveys and one-on-one interviews. Based on the results and feedback, EWP is improving its current social contribution projects.

Feedback and improvements of social contribution projects

External feedback	· Beneficiary-oriented volunteer activities · Lack of professionalism in service activities	· Surveys on the needs of the community, and reflecting the results in the selection of beneficiaries and the activity cycle · Implementation of volunteer programs in cooperation with external agencies (welfare centers, NGOs)
Internal feedback	· Lack of voluntary and active participation	· Rewards to departments and employees with excellent performance on volunteer services · Establishment of guidelines for the evaluation of diligence and attitude in volunteer services

Energy Welfare for the Disadvantaged — Unit: households

* Including electric facility restoration activity in areas struck by Typhoon Chaba

Win-win Development with Local Communities

Promoting regional energy welfare

EWP supports recipients of national basic living subsidies through donation to the Happy Energy Voucher project of the Health Points, which are gathered through the stair climbing campaign and the voluntary donation of the employees. In addition, for social welfare facilities that cannot afford proper management of electric equipment, EWP has replaced fluorescent lights with LED lights and inspected their electric equipment to help them save energy and prevent accidents. EWP also restored the electricity facilities of the typhoon-stricken areas and contributed to the quick return to normal daily life of the typhoon sufferers. EWP received an appreciation plaque from Jung-gu Office of Ulsan and an award certification from the mayor at the Ulsan City Volunteer Festival, in recognition of its restoration activities in the area affected by the typhoon.

Donating prize money for the achievement of zero accident rate

EWP awards prize money every year to its partner companies when it achieves the goal of a zero accident rate and also its resident partners. EWP and its partners, as members of the local community, have agreed to return this prize money to society. They have donated safety goods including fire extinguishers, fire detectors, emergency disaster prevention products and others to the facilities that are vulnerable to safety accidents, such as social welfare facilities and military camps around the power plants and elderly people living alone. EWP and its business partners have returned approximately KRW 35 million prize money to the local community from 2014 to 2016.

Direct trading market for local food

EWP operates EWP Direct Trading Markets for agricultural products and local food so that locally cultivated and produced farm products and food can be consumed by locals. Dangjin Coal-fired Power Plant has held these direct trading markets at least four times a year to revitalize the local economy, and invited village enterprises and other villages in one-on-one sisterhood relationships with companies. Direct transactions between agricultural producers and final buyers do not require intermediary fees, so farmers can earn greater profits and consumers can buy agricultural products at lower prices, which makes these markets well-received among locals.

Spread of a Culture of Sharing

▲ Spread of a culture of sharing

Scholarships for youth

EWP Dangjin Coal-fired Power Plant's scholarship committee has selected local scholarship students since 1995 and awarded them with as much as KRW 5.5 billion scholarships until 2016. In the same year, Ulsan Oil-fired & C.C Power Complex presented about KRW 150 million scholarships to 200 middle and high school students from low-income families. It has also provided musical instruments to children and teenagers in need, and scholarships to soccer teams in elementary and middle schools.

Revitalization of local traditional markets

EWP has purchased Onnuri Gift Certificates for the revitalization of local traditional markets, and designated a "day of visiting traditional markets" every month. It purchased Onnuri Gift Certificates worth KRW 760 million in 2016 and offered them to the employees to encourage them purchase goods in traditional markets, while also donating them to social welfare foundations to support both such foundations and traditional markets. In addition, EWP made a donation of KRW 265 million including goods to the traders of Ulsan Taehwa Market, which has been in a stagnant state due to Typhoon Chaba in 2016.

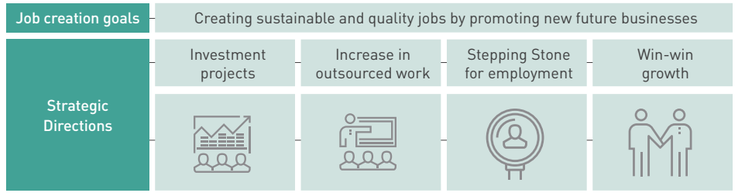
Job Creation

EWP seeks to boost the development of the local community and gain the power for the future growth through active job creation. It creates quality jobs through the promotion of new future businesses, overseas investment and support to SMEs.

New Job Creation System and Achievements

In the midst of advancement of private power generation companies and ICT convergence market, EWP has continued to discover practical tasks for creating new jobs, which totaled 14,133 in 2016.

Job creation system



Job creation achievements

Regular Position / Temporary Position / Units: jobs

	2014	2015	2016
Investment projects	10,096 / 4,973 / 15,069	3,199 / 1,576 / 4,775	4,866 / 2,289 / 7,155
Increase in outsourced work	162 / 54 / 216	211 / 91 / 302	427 / 164 / 591
Stepping Stone for Employment	-	-	50 / 19 / 69
Win-win Growth	4,408 / 2,024 / 4,942	6,523 / 1,674 / 7,242	4,296 / 2,022 / 6,318
Total	14,666 / 7,051 / 21,717	9,933 / 3,341 / 13,274	9,639 / 4,494 / 14,133

Quality Jobs Linked to Future Business

Job creation through investment projects

EWP is creating quality jobs through investment in power plant projects and linkage with future businesses. EWP created 7,028 quantity jobs through domestic projects such as the construction of Dangjin Coal-fired Power Plant's Units 9 and 10 and the supplement of plant facilities, as well as through overseas projects including the construction of a coal-fired power generation in Kalsel, Indonesia. In addition, EWP created 127 quality jobs in the same year through ICT technology-applied solution business, linked to the Fourth Industrial Revolution and other future businesses including photovoltaic power and off shore wind power generation.

Job creation through increase in outsourcing

EWP has outsourced maintenance jobs including fuel environment facility maintenance and power generator maintenance to the private sector, which led to the creation of 251 jobs. In addition, it carried out its informatization and security improvement projects through outsourcing and hired big data and cloud server experts, thereby creating 166 quality jobs in total. In addition, EWP created 49 local community jobs in the same year by outsourcing coal dust, waste furniture and wood recycling projects to local businesses near power plants.

▲ Open Power Plant Program

Job creation through the Stepping Stone for employment

EWP has collaborated with four major power generation companies in Korea to conduct training and internship on the power generation industry for about five months, from participant selection to recruitment, which led to the creation of eight jobs for youth in 2016. In addition, EWP is also running another "Stepping Stone for Employment" program, dedicated to finding excellent marine equipment companies and the Open Power Plant program*. Through this program, it has discovered more than 200 new marine equipment companies, helping workers with shipbuilding skills find a job again and promoting the participation of new maintenance companies in the projects. These efforts resulted in the creation of 61 jobs in 2016.

* One of EWP's win-win growth programs that aims at the enhancement of the understanding of power generation facilities through an annual field-trip to power plants for the observation of equipment disassembly/maintenance work and field experience.

Jobs for Win-win Growth

Newly created **4,350 jobs**

Job creation through support for market expansion

EWP is carrying out the Power Silk Road project to support globalization and future growth of energy-related SMEs, venture and startup companies. It is helping participating companies in nine areas including facility and space rentals, mentoring and consulting support and overseas market pioneering. EWP is actively supporting the market opening of the participating companies by using the capabilities and network of EWP. As a result, the participating companies achieved sales of KRW 550.8 billion in total including a contract for USD 2.3 million with India, and created 4,350 jobs.

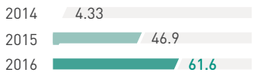
Revenues of KRW **26.5** billion with successful commercialization of new technologies

Job creation through support for SMEs' R&D projects

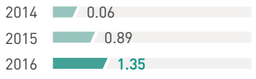
EWP is helping SMEs in their development of the technologies that demanders such as public agencies and large corporations have proposed to develop, by expressing their intention to purchase them. EWP has strengthened collaboration by encouraging SMEs to participate in energy forums and technology exchanges to boost their development, while supporting KRW 16.37 billion as research expenses to reduce their financial burden for technology development. The participating SMEs accomplished total sales of KRW 26.5 billion and created 427 jobs through the sales of successfully commercialized technologies.

Purchase of social enterprises' products

Social enterprises — Unit: KRW 100 million



Cooperative associations — Unit: KRW 100 million



Job creation through support for SMEs' growth

Since 2007, EWP has held a purchase conference to help SMEs exchange information and develop their markets in the first and second halves of the year. To help SMEs promote their products, EWP has displayed 45 outstanding SME products in 6 permanent exhibition halls in the head office and business operations. Also, it has provided one-on-one customized purchasing consultations with the staff in charge of the facilities and online purchasing consultations to diversify the sales channels for excellent products of SMEs. This attempt came to fruition with 1,347 new jobs.

Job creation through support for social enterprises

EWP is helping cooperative associations, social enterprises and other companies making efforts to realize economic and social values in their growth and job creation, by supporting the purchase of their products. It purchased social enterprise products worth KRW 6.16 billion and cooperative association products worth KRW 140 million, and held purchasing consultations to promote the market pioneering for their products. EWP has also helped women-led companies, by encouraging its employees to buy the products of these businesses. These efforts contributed to the creation of 194 jobs in social enterprises.

APPENDIX

Data Center

Financial Performance

Summary Statement of Financial Position

Classification	Unit	2014	2015	2016
Current asset	KRW 100 million	8,279	9,380	9,374
Non-current asset		75,428	78,906	80,306
Total asset		83,707	88,286	89,680
Current liabilities		6,322	10,211	17,473
Non-current liabilities		41,731	38,158	27,417
Total liabilities		48,053	48,369	44,889
Paid-in capital		21,381	21,381	22,186
Retained earnings		15,324	19,539	23,634
Total equity		35,654	39,917	44,790

(Based on separate financial statements)

Summary of Income Statement

Classification	Unit	2014	2015	2016
Sales	KRW 100 million	45,070	40,477	42,109
Cost of sales		41,710	33,548	34,474
Gross profits		3,360	6,928	7,635
Selling and administrative expenses		536	766	828
Operating profit		2,824	6,162	6,807
Other gains		93	297	254
Other costs		34	32	62
Financial gains		565	1,370	705
Financial costs		987	1,530	1,337
Profit (loss) before income taxes		2,104	6,096	6,212
Corporate tax expense		419	1,546	1,536
Net Profit		1,685	4,549	4,676

(Based on separate financial statements)

Economic Performance Indicators

Category	Unit	Type		2014	2015	2016
Facility capacity	MW			9,138	9,139.4	11,169.9
Power generation	GWh	Fossil fuels	Coal	38,781	39,252	38,785
			LNG	9,225	6,873	7,296
			Oil	2,693	3,114	5,730
			Total	50,699	49,239	51,810
		New and renewable energy	Total	305	286	293
		Company	Total	51,004	49,525	52,104
Sales	GWh			48,549	45,840	46,620
Sales price	won/kWh			91.19	85.09	85.88
Forced outage	%			0.098	0.556	0.062
Unplanned losses				0.387	0.743	0.163
Operating rate				99.88	91.44	85.60
Consumption rate				65.06	60.38	57.08
Thermal efficiency				39.65	39.5	39.02
Service power rate				5.19	5.46	5.74
Employees	KRW 100 million	Salary, Benefits		1,479	2,054	1,942
Shareholders		Dividends		253	679	944
Creditors		Interests		371	296	684
Government		Corporate tax, Local tax		543	1,643	1,901
Local Society		Social contribution, donation		41	40	39
Reinvestments		Surplus excluded from dividend		1,502	3,957	3,765

Environmental Performance Indicators

Category	Unit	Classification	2014	2015	2016
GHG	1,000 ton	GHG emissions (Scope1+Scope2)	38,230	37,951	39,742
	CO_2-eq	GHG emissions (Scope 3)	9,263	8,742	9,487
Energy consumption	TJ	Energy consumption	489,557	457,227	481,624
	GJ/MWh	Energy basic unit	9.76	9.29	9.30
Fuel consumption	10,000 ton	Coal	1,542	1,500	1,452
	1,000 KL	Oil	628	660	1,186
	1,000 ton	LNG	131	960	1,038
Air pollutant emissions	Ton	SOx	13,755	11,965	12,741
		NOx	24,799	21,552	21,965
		Dust	687	651	612
Air pollutant emissions relative to basic unit	Ton/GWh	SOx	0.271	0.243	0.246
		NOx	0.489	0.437	0.424
		Dust	0.014	0.013	0.012
Water pollutant emissions	Ton	COD	22	27	21
		SS	52	12	10
		T-N	1	47	33
		T-P	0.62	0.4	0.3
Wastewater discharged relative to basic unit	Kg/GWh	COD	0.38	0.55	0.41
		SS	1.03	0.24	0.19
		T-N	0.02	0.95	0.64
		T-P	0.01	0.01	0.01
Water usage	1,000 ton		12,055	10,267	12,763
Wastewater generated			3,161	3,416	4,006
Waste quantity			1,906	1,824	1,965
Waste recycling quantity			1,851	1,635	1,706
Desulfurized gypsum generation			467	495	509
Desulfurized gypsum recycling rate			459	480	507
Coal ash generation quantity			1,872	1,801	1,881
Coal ash recycling quantity			1,844	1,616	1,699

Social Performance Indicators

Category	Unit	Classification		2014	2015	2016
Employees	Person	Regular positions	Total	2,296	2,300	2,330
			Male	2,029	2,064	2,069
			Female	267	236	261
Minorities	%	The handicapped (rate)		3.4	3.4	3.4
	%	Females (rate)		11.5	10.7	11.2
	Person	Female managers		22	28	32
	%	Female managers (rate)		3.7	4.3	4.9
Job security	Year	Average service years		16.0	15.7	15.7
	%	Turnover		0.93	0.78	0.69
Socially equitable employment	Point	No. of recruits		131	16	35
		Personnel from non-capital area		78	10	10
		Individuals of national merit		15	0	10
		High school graduates		37	5	0
		The handicapped		9	0	4
		Female		32	0	6
Family-friendly management	Person	Employees on childcare leave	Total	21	41	54
			Male	4	5	1
			Female	17	36	53
	%	Post-childcare leave return rate		100	100	100
	Person	Women with flextime jobs		7	15	20
	Person	Staff utilizing flexible work systems		598	699	812
	Day	Number of days used for leave		12.4	14.1	14.8
	Person	Employees who have taken extended leave		555	554	603
Manpower training	Hour	Average training hours per person		124	188	211
	KRW 1,000	Education costs per person		2,680	2,540	2,697
	KRW 100 million	Education budget		58.2	58.4	63
	Person	Education participants		24,628	29,735	38,586
	Point	Female employee capability index		4.42	4.57	4.71
Social contribution	KRW 100 million	Donation		6	6	9
	Hour	Volunteer service hours		55,588	58,482	60,035
	Hour	Volunteer service hours per person		24	26.6	26.7
Integrity assessment	Point	Evaluation of Anti-corruption & Civil Right Commission		8.56	8.80	8.35
Anti-corruption policy assessment	Grade	Evaluation of Anti-corruption & Civil Right Commission		1	1	2
Stakeholder engagement	%	Ratio of employees' union membership		97.7	98.5	97.39
Employee safety	%	No. of deaths x 10,000 / total no. of employees		2.87	0	9.28
	Case	Number of accidents		22	13	3
	Point	Safety culture maturity level		3.95 (Level 3)	3.97 (Level 3)	4.03 (Level 4)
	Point	Safety culture engagement		3.51	3.51	4.21
Win-win growth	KRW 100 million	Support of SME R&D Funds		164	143	149
		Purchase of successful joint R&D products with SMEs		162	195	265
Employees' safety	KRW 100 million	According to the Act on assistance to electric power plants for neighboring areas		35	34	30
	Household	Energy welfare for the disadvantaged		72	103	1,613*
	KRW 100 million	Purchase of Onnuri Gift Certificates		7.7	7.5	7.6
	KRW 100 million	Purchase of social enterprises' products	Social enterprises	4.33**	46.9	61.6
			Cooperative associations	0.06	0.89	1.35

* Including support for the restoration of damages caused by Typhoon Chaba ** Execution of less budget due to public organizations' effort to reduce debt in 2014

GRI Content Index

Universal Standards

GRI 102: General Disclosure

Topic		Disclosure	ISO 26000	Page	Verified
Organizational profile	102-1	Name of the organization	6.3.10/ 6.4.1-6.4.2/ 6.4.3/6.4.4/ 6.4.5/6.8.5/ 7.8	7	V
	102-2	Activities, brands, products, and services		9~11	V
	102-3	Location of headquarters		7	V
	102-4	Location of operations		9, 10	V
	102-5	Ownership and legal form		7, 8	V
	102-6	Markets served		7, 8	V
	102-7	Scale of the organization		7	V
	102-8	Information on employees and other workers		89	V
	102-9	Supply chain		15, 16	V
	102-10	Significant changes to the organization and its supply chain		N/A	V
	102-11	Precautionary principle or approach		28	V
	102-12	External initiatives		31, 32, 94	V
	102-13	Membership of associations		97	V
Strategy	102-14	Statement from senior decision-maker	4.7/6.2/7.4.2	5, 6	V
Ethics and integrity	102-16	Values, principles, standards, and norms of behavior	4.4/6.6.3	25	V
Governance	102-18	Governance structure	6.2/7.4.3/7.7.5	23	V
	102-21	Consulting stakeholders on economic, environmental, and social topics		29	V
	102-22	Composition of the highest governance body and its committees		23	V
	102-23	Chair of the highest governance body		23	V
	102-24	Nominating and selecting the highest governance body		23	V
	102-31	Review of economic, environmental, and social topics		24	V
Stakeholder Engagement	102-40	List of stakeholder groups	5.3	29	V
	102-41	Collective bargaining agreements		89	V
	102-42	Identifying and selecting stakeholders		29	V
	102-43	Approach to stakeholder engagement		29	V
	102-44	Key topics and concerns raised		29	V
Reporting practice	102-45	Entities included in the consolidated financial statements	5.2/7.3.2/ 7.3.3/7.3.4	86	V
	102-46	Defining report content and topic boundaries		30	V
	102-47	List of material topics		30	V
	102-48	Restatements of information		N/A	V
	102-49	Changes in reporting		N/A	V
	102-50	Reporting period	7.5.3/7.6.2	About this report	V
	102-51	Date of most recent report			
	102-52	Reporting cycle			
	102-53	Contact point for questions regarding the report			
	102-54	Claims of reporting in accordance with the GRI Standards			
	102-55	GRI Content Index		90~92	V
	102-56	External assurance		93, 94	V

Topic-specific Standards

GRI 200: Environmental

Topic		Disclosure	ISO 26000	Page	Verified
Economic Performance					
GRI 103: Management Approach 2017	103-1	Explanation of the material topic and its Boundary		35	V
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Economic Performance	201-1	Direct economic value generated and distributed	6.8.1-6.8.2/6.8.3/6.8.7/6.8.9	40, 86, 87	V
Indirect Economic Impacts					
GRI 103: Management Approach 2017	103-1	Explanation of the material topic and its Boundary		41, 71	V
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Indirect Economic Impacts	203-1	Infrastructure investments and services supported	6.3.9/6.8.1-6.8.2/6.8.7/6.8.9	44	V
	203-2	Significant 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	74~76, 83, 84	V
Anti-corruption					
GRI 103: Management Approach 2017	103-1	Explanation of the material topic and its Boundary		25~27	V
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Anti-corruption	205-1	Operations assessed for risks related to corruption	6.6.1-6.6.2/6.6.3	27	V
	205-2	Communication and training about anti-corruption policies	6.6.1-6.6.2/6.6.3	26	V

GRI 300: Economic

Topic		Disclosure	ISO 26000	Page	Verified
Materials					
GRI 103: Management Approach 2017	103-1	Explanation of the material topic and its Boundary		51, 59	V
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
	301-2	Recycled input materials used	6.5.4	59, 88	V
Energy					
Energy	302-1	Energy consumption within the organization	6.5.4	88	V
Water					
GRI 103: Management Approach 2017	103-1	Explanation of the material topic and its Boundary		51, 56	V
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Water	303-3	Water recycled and reused	6.5.4	56, 88	V
Emissions					
GRI 103: Management Approach 2017	103-1	Explanation of the material topic and its Boundary		61, 53, 54	V
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Emissions	305-1	Direct (Scope 1) GHG emissions	6.5.5	53, 88	V
	305-2	Energy indirect (Scope 2) GHG emissions	6.5.5	53, 88	V
	305-3	Other indirect (Scope 3) GHG emissions	6.5.5	88	V
	305-5	Reduction of GHG emissions	6.5.5	53	V
	305-7	Nitrogen oxides (NO_X), sulfur oxides (SO_X), and other significant air emissions	6.5.3	55, 88	V

Topic		Disclosure	ISO 26000	Page	Verified
Effluents and Waste					
GRI 103: Management Approach 2017	103-1	Explanation of the material topic and its Boundary		51, 56, 59	V
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Effluents and Waste	306-1	Water discharge by quality and destination	6.5.3/6.5.4	56	V
	306-2	Waste by type and disposal method	6.5.3	56, 59	V
	306-4	Transport of hazardous waste	6.5.3	56	V

GRI 400: Social

Topic		Disclosure	ISO 26000	Page	Verified
Employment					
GRI 103: Management Approach 2017	103-1	Explanation of the material topic and its Boundary		63~67	V
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Employment	401-1	New employee hires and employee turnover	6.4.3	89	V
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	6.4.4/6.8.7	67	V
	401-3	Parental leave	6.4.4	67, 89	V
Occupational Health and Safety					
GRI 103: Management Approach 2017	103-1	Explanation of the material topic and its Boundary		63, 68~70	V
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Occupational Health and Safety	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	6.4.6/6.8.8	68, 89	V
	403-3	Workers with high incidence or high risk of diseases related to their occupation	6.4.6/6.8.8	64	V
Training and Education					
GRI 103: Management Approach 2017	103-1	Explanation of the material topic and its Boundary		63, 66	V
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Training and Education	404-1	Average hours of training per year per employee	6.4.7	66, 89	V
	404-2	Programs for upgrading employee skills and transition assistance programs	6.4.7/6.8.5	66	V
Diversity and Equal Opportunity					
GRI 103: Management Approach 2017	103-1	Explanation of the material topic and its Boundary		63, 65, 66	V
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	6.2.3/6.3.7/ 6.3.10/6.4.3	65, 66, 89	V
Human Rights Assessment					
GRI 103: Management Approach 2017	103-1	Explanation of the material topic and its Boundary		25~27	V
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Human Rights Assessment	412-2	Employee training on human rights policies or procedures	6.3.5	27	V
Local Communities					
GRI 103: Management Approach 2017	103-1	Explanation of the material topic and its Boundary		79	V
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Local Communities	413-1	Operations with local community engagement, impact assessments, and development programs	6.3.9/ 6.5.1-6.5.2/ 6.5.3/6.8	81, 82	V

Third-party Assurance Statement

Dear Korea East-West Power Corporation Management and Stakeholders

Introduction

The Korean Standards Association ("KSA") was commissioned by Korea East-West Power Corporation ("EWP") to perform a third-party Assurance Engagement of 'Korea East-West Power Corporation 2017 Sustainability Report' (the "Report"). KSA presents independent opinions as follows as a result of feasibility of the data contained in this Report. Korea East-West Power Corporation has sole responsibility for content and performance contained in this Report.

Independence

As an independent assurance agency, KSA does not have any kinds of commercial interest in businesses of Korea East-West Power Corporation apart from undertaking a third-party assurance on the Report. We have no other contract with Korea East-West Power Corporation that may undermine credibility and integrity as an independent assurance agency.

Assurance Standards and Level

This Assurance Engagement followed the AA1000AS (2008) assurance standards to provide Moderate Level assurance. We checked the three principles of inclusivity, materiality, and responsiveness in combination with information credibility of the Report. We also verified whether the Report content was created in accordance with the GRI Standards Core Option.

Assurance Type, Scope and Limitations

We performed a Type 2 Assurance Engagement in accordance with AA1000AS. This implies that we verified the accuracy and quality of the statements made by Korea East-West Power Corporation and the sustainability performance data included in this Report. The scope of verification is a period from Jan 1, 2016 to Dec 31, 2016, and depending on the content, includes some information for the first half of 2017. The results and reporting practices of EWP's related companies, overseas branches, suppliers, partners, and third parties, excluding the EWP's head office and business sites stated in the report, are not included in the scope of this verification. The scope of this Assurance Engagement primarily includes the systems and initiatives undertaken by Korea East-West Power Corporation including its sustainability management policies, goals, projects, standards and performance during the reporting period defined in the Report. While the company's environmental and social data as well as financial data was verified, the scope of review concerning stakeholder engagement was limited to the materiality test process.

Assurance Methodology

We used the following methods to gather information, documents and evidence with respect to the assurance scope.

- Analyses of articles related to EWP's sustainability management published by domestic media outlets over the last three years
- Analyses of issues reported in the sustainability reports published by domestic and overseas industry peers
- Verification of management system and process to improve achievement in sustainability management and to prepare the Report
- Review of the consistency between the financial performance data and the company's audit report/publicly announced data
- Examination of internal documents and basic materials

Assurance Results and Opinions

KSA reviewed the draft version of this Report to present our opinions as an assurance provider. Modifications were made of the Report content if deemed necessary. We were not aware of any significant errors or inappropriate descriptions in this Report as a result of our Assurance Engagement. As such, we present our opinions of the 2017 Korea East-West Power Corporation Sustainability Report as follows.

| Inclusivity | Has Korea East-West Power Corporation engaged its stakeholders in strategically responding to sustainability?

We confirmed that, in carrying forward its sustainability management, Korea East-West Power Corporation (EWP) strived for participation of key stakeholders, and secured and operated various communication channels. In addition, we could not find any significant stakeholder groups omitted in this process. Especially, by conducting in-depth interviews with the representatives of each stakeholder group, we had the value of the stakeholders reflected in the business activities of EWP.

| Materiality | Has Korea East-West Power Corporation included material information in the Report to help stakeholders make informed decisions?

We decide that EWP has neither leaked any important information to the stakeholders nor excluded any such information. In addition, we have confirmed that EWP implemented the materiality evaluation based on major issues derived from both internal and external environment analyses, and then reported in accordance with the results. In 2016, by reflecting "Significant Issues" and "Six Directions for the Sustainability Management of Korea East-West Power Corporation" in the table of contents, EWP helped readers easily grasp significant issues in the aspect of its sustainability management.

| Responsiveness | Has Korea East-West Power Corporation appropriately responded to stakeholder requirements and interest in this Report?

We have confirmed that EWP is striving to respond to stakeholders' interests and requirements by reflecting the opinions collected from them in the Report. In addition, we could not find any evidence that EWP's responsive activities to the material issues related to stakeholders had been inappropriately reported. Though EWP reports on the sustainability strategy and major performances pursuant to stakeholders' interests and opinions, we recommend that henceforth EWP also report both quantitative and qualitative goals and their attainment level according to the strategy of each sector.

Opinions and Recommendations by Sector

We recommend EWP to review the following in order that it might be able to establish the overall organization-wide sustainability strategy and respond to the sustaining issues.

| Economic |

The electricity industry is a vital industry forming the backbone of the national economic activities as the core energy for the everyday lives of people in modern society, thereby requiring stable electric power supply and efficient power production. Korea East-West Power Corporation can attain sustainable growth by strengthening the future growth engines and, simultaneously, establishing and operating various risk management systems against uncertainties of the management environment. In addition, the goals of performance-oriented responsible management and high-level transparent management should be attained for sustainable development and, in order to attain such goals, we recommend EWP to continuously enhance preemptive risk management ability against both financial and non-financial risks.

| Environmental |

It is remarkable that for environmental preservation and sustainable future growth Korea East-West Power Corporation reduces the weight of conventional energy fuel including coal, crude petroleum, etc., and expands supply of new regeneration energy, such as photovoltaic energy, fuel cell, wind power, waste, ocean energy, energy storage system (ESS) linked to new renewable energy, etc. In the context of sustainability, we recommend EWP to report in more detail its endeavor and performance for operation of the eco-friendly power plant, as well as the economic performance through operation of the overseas power plants.

| Social |

Korea East-West Power Corporation operates four power plants in foreign countries, including Jamaica, the USA and Guam, beyond the domestic market for securing stable profit structures and future growth engines. We recommend EWP to strive for creating a new shared value as a global electric power enterprise by expanding the business area globally, thereby reorganizing the promotion strategy of the social contribution, and by developing the contribution activities for overseas communities making the most of EWP's business character.

KSA KOREAN STANDARDS ASSOCIATION 한국표준협회

AA1000
Licensed Assurance Provider
000-70

Baek, Soo Hyun

November 2017
KSA Chairman & CEO

UN Global Compact Advanced Level

	Topic	Principle	Page	GRI Disclosure
1	Governance	This sustainability report (the Report) describes the discussions at the level of the CEO and the BOD regarding the strategic aspects of the implementation of the UNGC.	5, 6	102-14
2		The Report explains the company's decision-making processes and corporate governance to achieve its sustainability.	23	102-18, 21
3		The Report describes the engagement of all of the company's major stakeholders.	29	102-43
4	UN Goals and Issues	The Report describes activities designed to support comprehensive goals and issue of the United Nations.	31,32	102-12
5	Human Rights	The Report describes the company's strong commitment, strategies and policies in the area of human rights.	27	103-1
6		The Report describes an effective management system designed to integrate its human rights principles.		103-2
7		The Report describes effective monitoring and evaluation mechanisms about human rights principles.		103-3
8		The Report applies standardized performance indices (including GRI) about human rights.		412-2
9	Labor	The Report describes the company's strong commitment, strategies and policies in the area of labor.	63	103-1
10		The Report describes an effective management system designed to integrate its labor principles.	65-67	103-2
11		The Report describes effective monitoring and evaluation mechanisms about labor principles.		103-3
12		The Report applies standardized performance indices (including GRI) about labor.	89	401-1~3, 403-2~4
13	Environment	The Report describes the company's strong commitment, strategies and policies in the area of environmental management.	51	103-1
14		The Report describes an effective management system designed to integrate its environmental principles.	53	103-2
15		The Report describes effective monitoring and evaluation mechanisms about environmental management.	55~57, 60	103-3
16		The Report applies standardized performance indices about environmental management.	89	301-2, 302-1, 303-3, 305-1~7, 306-1, 24
17	Anti-Corruption	The Report describes the company's strong commitment, strategies and policies in the area of anti-corruption efforts.	25-27	103-1
18		The Report describes an effective management system designed to integrate its anti-corruption principles.		103-2
19		The Report describes effective monitoring and evaluation mechanisms in the area of anti-corruption efforts.		205-1
20		The Report applies standardized performance indices about anti-corruption efforts.		205-2
21	Strategies, Governance and Engagement	The Report explains about the implementation of Global Compact Principles within the company's value chain.	-	-
22	External Assurance and Transparency	The Report offers information on the corporate profile and operational environments.	7-18	102-1~11
23		The Report includes a high level of transparency and disclosure.	1, 90~94	102-50~56

Awards in 2016

▲ Voluntarily participated in CDP for 5 consecutive years

▲ Won the Excellent Award at Korean Society of Public Enterprise R&D

▲ Awards at 2016 Voluntary Service Festival hosted by Ulsan Metropolitan City

▲ Won the Presidential Award at the Best Government 3.0 Application Contest for Public Agencies

Received the Award of Best Project Discovery at the Innovative Technology Show for the 9th consecutive year
Won the Presidential Award at the Best Government 3.0 Application Contest for Public Agencies (Ministry of Government Administration and Home Affairs)
Selected as an excellent corporation in the spread of performance-focused culture and operation of performance-based annual salary system by the Ministry of Strategy and Finance in 2016
Top rating (AAA) in the KoBEX SM (Korean Business Ethics Index-Sustainability Management) for the 9th consecutive year
Received the first prize at the 1st Cyber Security Competition for Public Agencies (Award from the Minister of Trade, Industry and Energy)
Selected as excellent organization at the 2016 Ulchi Response Drill (Won the Award from the Minister of Public Safety and Security)
S grade in the Disaster Response and Safety Drill for the fourth straight year (2013-2016)
Top rating (A) in the National Disaster Management Assessment
Selected as an outstanding stockpile resource management organization (Won the Award from the Minister of Public Safety and Security)
Achieved 751 points (top level) at the EWP Quality Assessment, and won the Award of Excellent Quality Competitiveness for the seventh time
First Korean power generation company to have voluntarily participated in the Carbon Disclosure Project for the 6th consecutive year and won the Award of Excellent Company (CDP)
Ranked 1st in competitiveness in response to climate change among power generation companies for the 6th consecutive year (ranked second among 316 companies)

Association Memberships

Membership Organization	Purpose	Time of Subscription
The Korean Association of Small Business Studies	To ensure rapid policy response and exchange of academic information with active participation in the government's establishment of shared growth policies	2011.07
The Korea Electric Association	To establish and modify technical standards for the electrical industry designed to boost the credibility of power generation facilities and develop new codes	2002.09
The Korea Energy Foundation	To promote energy welfare programs like the support for low-income households together with scholarship programs	2002.05
World Energy Congress	To establish human and technical exchange networks with the member countries of an energy-related international body	2007.01
Korea Institute of Enterprise Architecture	To collect information on ways of upgrading the EA level	2013.03
Korea International Trade Association	To cooperate on the data and information related to international trade	2001.05
KEPIC	To participate in KEPIC development directions and secure funds	2002.05
Korean Standards Association	To introduce advanced quality control techniques and spread quality management mind throughout the company	2003.01
Korea Suggestion System Association	To acquire information for the promotion of suggestions and small group activities in the company	2007.05
The Electric Utility Cost Group (EUCG)	To collect information on overseas electric power supply and benchmarking	2006.01
The Business Institute for Sustainable Development	To exchange information on sustainability management	2008.11
The Korea Carbon Capture and Storage Association	To exchange information on carbon capture and storage	2010.09
Korea Smart Grid Association	To exchange information on smart grid and collect information on industrial trends	2012.07
United Nations Global Compact (UNGC)	To exchange information on sustainability management and engage in exchange at home and abroad	2006.06
Korean Green Business Association	To support GHG mentoring project for major companies and SMEs	2012.03
The Korean Society of Mechanical Engineers	To identify domestic trends in mechanical engineering and exchange information	2002.08
The Korean Institute of Electrical Engineers	To identify domestic trends in electrical engineering and exchange information	2002.06
Korean Association of Power Generation Studies	To enhance the power industry and discover joint research topics	2010.07
Korea Project Management Association	To enhance the capabilities for project execution	2008.03
KOREA Engineering & Consulting Association	To promote advance into new business at home and abroad in the areas of design and technical support through certification of corporate engineering performance	2012.07
Korea New & Renewable Energy Association	To exchange information in the area of new & renewable energy	2003.01
EEI(Edison Electric Institute)	To obtain information to expand into overseas markets or increase its overseas presence	2004.03
Association of the Electricity Supply Industry of East Asia and Western Pacific (AESIEAP)	To obtain information to expand into overseas markets or increase its overseas presence	2011.02
Korea Electric Engineers Association	To promote R&D in electric engineering and boost training of electric engineers	2008.03
Maritime Resource & Salvage Association	To enhance cooperation between public and private sectors in order to prevent and respond to maritime disasters and accidents	2013.05

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EWP Sustainability Report 2017

More detailed information on the contents of this report and its PDF version can be found on the website of Korea East-West Power.
If you have any questions about EWP's sustainability management activities and achievements introduced in this report, please refer to the contact information below:

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