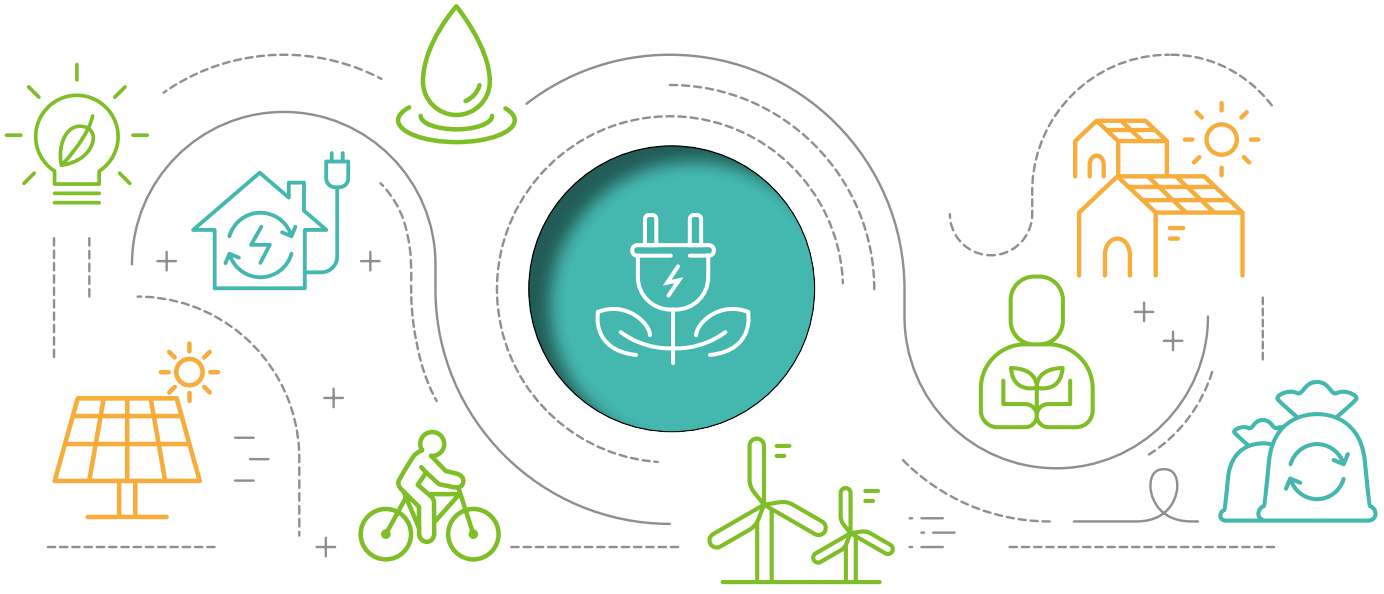
ENRICH THE WORLD WITH CLEAN ENERGY

EWP Sustainability Report 2019



KOREA EAST-WEST POWER CO.,LTD.

About this Report

Every year, Korea East-West Power publishes a sustainability report to disclose its sustainable management goals and performance achievements and to share with stakeholders the values pursued by Korea East-West Power and its commitments. This is the thirteenth sustainability report of Korea East-West Power, which highlights significant changes and performance achievements in management since the last report was published.

Scope and Period of the Report

The reporting period of this report is based on the fiscal year of 2018 (January 1, 2018 - December 31, 2018) and reports on the significant financial and non-financial performance results from during the reporting period. As for quantitative performance, the figures for 2016 to 2018 were used to identify trends in change, and some qualitative performance results include the details of the first half of 2019. The scope of report also includes the domestic and overseas operations of Korea East-West Power.

Preparation of the Report and Validation Standard

This report has been prepared in accordance with the core compliance method of the Global Reporting Initiative (GRI) Standard, which is an international reporting guideline for sustainable management. To enhance the reliability of the details reported, they were validated by a third-party institution, and the results of validation are made available in the third-party validation statement (pp.88-89).

Report Related Inquiries

The report may be reviewed in Korean and English or downloaded in PDF format from the Korea East-West Power's website (www.ewp.co.kr). If you have any further questions about the report, please contact us.

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A Message from the CEO

Dear stakeholders,
Thank you very much for your interest in and support for the sustainable management activities of Korea East-West Power Corporation.

Korea East-West Power is an eco-friendly energy company which has the responsibility to supply clean power in a stable manner under the mandate of the state and the people. As a public enterprise leading Korea's power generation industry, we are endeavoring to the greatest extent possible to achieve sustainable growth and create social and environmental values based on our mission.

This 13th sustainability management report discusses our economic, environmental and social activities, focusing on the social values which account for the characteristics of Korea East-West Power in a transparent manner.

The 'corporate social responsibility' of a company is newly defined as the concept of 'social value'. Here, 'social value' refers to the value of making a contribution to the public interest and community development across all areas, such as society, economy, environment, and culture. Korea East-West Power has developed unique indicators to measure its performance in the area of social values, and is operating the 'Korea East-West Power specific social value platform' which can reflect these in the management activities. In addition to the monetary profits and expenses generated and incurred from and by undertaking corporate activities, external effects on the society as a whole were quantified in monetary terms, thereby creating KRW 366.4billion of social value in 2018. Moreover, we have decided to create a social value BI called 'Energy Power Plant Full of **Vitality**' which aims to create an economic **symbiotic** ecosystem, **jointly** resolve social issues, and strengthen **sympathy** and social exchanges, and are endeavoring to achieve KRW 2.5trillion of social value by 2022.

To contribute to building a clean air environment, Korea East-West Power is working to achieve a 45% reduction of air pollutants as of the end 2019 compared to 2015 levels by installing a combined denitrification facility for all units of combined cycle power plants, adding 1 stage of coal fired denitrification catalyst, and expanding the use of low coal and low sulfur oil. As well, we have acquired ISO 45001 (safety and health management system), a first for a power generation company in Korea. This is the latest international standard that is granted to companies equipped with a system for preventing and managing risks which may occur at the workplace. Through this, we will ensure that even more diverse efforts are made to prevent industrial accidents so that all Korea East-West Power workers, including those at partnering businesses, can work safely in a happy workplace.

Together with this, in order to take a significant leap forward to become a comprehensive energy company leading low carbon green management, we are implementing our own differentiated 'RE3025' implementation strategy to achieve an emissions reduction of 25%, which is 5% higher than the government's new and renewable energy target, by 2030. In the process of converting our coal fired power generation into an eco-friendly energy source, we are also contributing to revitalizing the domestic economy, such as by expanding the use of domestic equipment and materials and by linking with local specialized industries. As such, we are doing the best we can to live up to our part of the contribution to the government's 3020 implementation plan for renewable energy and to secure a future growth engine for Korea East-West Power.

At Korea East-West Power, we will continue to carry out our social responsibilities, and will communicate with our stakeholders regularly as we grow into a sustainable institution. We ask for your continuing interest and support.

Thank you.

October 2019
President of Korea East-West Power Corporation
Park Il-Jun

대표사원 박 일 준

Introducing EWP

Introduction to Korea East-West Power

Overview of the Company

Korea East-West Power is one of the six subsidiaries for power generation separated from the Korea Electric Power Corporation in 2001 in accordance with the Act on the Promotion of Restructuring of the Electric Power Industry of the Government.

Key Management Indicators

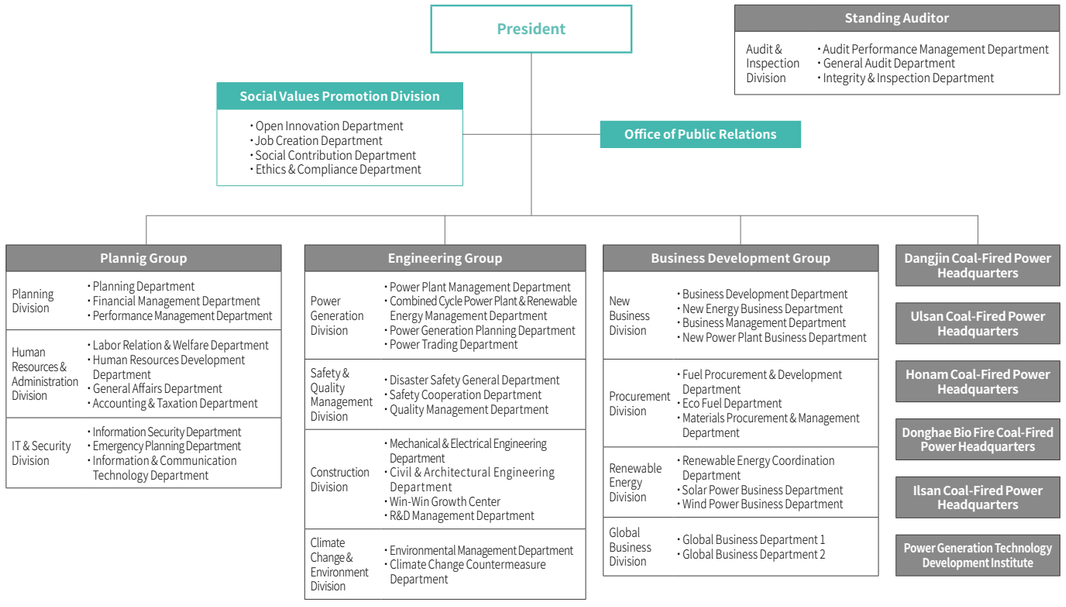
as of December 2018

Date of Founding	April 2, 2001
Basis of Founding	Article 1 of the Electric Power Industry Restructuring Act (Article 530-2 of the Commercial Act, December 23, 2000)
Key Industry	Power Resource Generation· Development Business
Location of Headquarters	395, Jongga-ro, Jung-gu, Ulsan, Korea
Competent Authority	Ministry of Trade, Industry and Energy
President	Park Il-Jun
Number of Employees	2,460 people

Shareholders' Composition	100% by Korea Electric Power Corporation
Power Generation	53,475 GWh
Electricity Sales Volume	50,766 Gwh
Electricity Sales Revenue	KRW 4,777.2billion
Capital	KRW 4,651.9billion
Total Assets	KRW 8,744.4billion won
Operating Profits/ Net Profits	KRW 56billion/KRW 3.3billion

Organizational Structure

Korea East-West Power maintains a three-headquarters system consisting of the Planning Group, Engineering Group, and Business Development Group, while reorganizing the Climate Change & Environment Division into a separate organization under the Engineering Group to reflect its commitment to protecting the environment. In addition, we are strengthening the role of Safety & Quality Management Division to create a safe workplace.



History

1898.01 Founded Hansung Electric Power, the first electric power company in Korea

1915.09 Founded Kyungsung Electric Power Co., Ltd.

1943.08 Founded Chosun Electric Power Co., Ltd. Korea

1946.05 Founded Namsun Electric Power Co., Ltd.

1961.07 Founded Korea Electric Power Corporation after three companies were integrated

1982.01 Founded Korea Electric Power Corporation

2001.04 Separated into Korea East-West Power Co., Ltd.

2014.06 Relocated headquarters to Ulsan Innovation City

Highlighted Sustainable Management Performance

Economy | Environment | Society

2007	Won the BSC Hall of Fame Award	Registered with the UN for the solar CDM business	Won the National Quality Master Craftsman and Presidential Award at the 32nd National Quality Management Conference
2008	Won the 2007 Republic of Korea Technological Innovation Award	Selected as an Eco-friendly Company and acquired ISO 14001 Certification	Won the Grand Prize for Labor Company Culture Sponsored by the Government
2009	Won the Grand Prize for the Longest Surviving Trouble Free Operation	Registered with UN for the Mini Hydro Power CDM Business	Won the Grand Prize for the 2008 Republic of Korea Technological Innovation and Management
2010	Won the 8th Digital Innovation Award for 3 consecutive years	Won the Grand Prize for the 2009 Korea Green Awards Field Area	Won the Grand Prize for the 8th Republic of Korea Safety
2011	Won the LONGEST RUN AWARD sponsored by EUCG	Won the 2nd Green Technology Grand Prize	Awarded the title of Excellent Company by the Ministry of Patriots and Veterans
2012	Selected as the UNIT OF THE YEAR sponsored by the Guam's power authority	Won the Grand Prize in the UN Global Compact Eco-friendly Division	Won the Minister of Gender Equality and Family Award
2013	Selected as the BEST PERFORMER sponsored by EUCG	Acquired the Certification of Excellent Company for Climate Change	Won the Prime Minister's Award for Child Delivery Friendly Policy
2014	Won the 2013 Transparent Management Award	Won Grand Prize for the Republic of Korea New Growth Management and Green Technology Area	Won the 2013 Minister's Award for Excellence Institution for Nurturing Talents for Regional Technology
2015	Won the Republic of Korea's Economic Leader for Coexistence Areas Award	Won the Special Award for the Carbon Information Disclosure Project (CDP) for 2 consecutive years	Won the Presidential Citation for Excellent Institution for Nurturing SMEs
2016	Won the 7th Excellent Company for Quality Competitiveness Award	Ranked 1st for the Climate Change Competitiveness Index Power Generation Industry for 6 Consecutive Years and won the Special Award for 3 Consecutive Years for CDP	Rated Class S for 4 Consecutive Years for the Safe Korea Training
2017	Won the Presidential Award for the Public Enterprise Government 3.0 Performance Sharing Yard	Voluntarily Participated in the CDP for 5 Consecutive Years and won the Excellent Company Award for 4 Consecutive Years	Gained the Highest Rating for the National Infrastructure System Disaster Management Evaluation (Class A)
2018	Acquired the Certification of Excellent Workplace for Energy Champion (Most Certified Workplace for Public Enterprise)	Won the Prime Minister Award for the Most Beloved Republic of Korea Enterprise Award	Won the Minister of Health and Welfare Award

Business Portfolio

Domestic Business

Korea East-West Power operates power plants at Dangjin Coal-Fired Power Headquarters, Ulsan Coal-Fired Power Headquarters, Honam Coal-Fired Power Headquarters, Donghae Bio Fire Coal-Fired Power Headquarters, and Ilsan Coal-Fired Power Headquarters to develop and grow power generation resources and supply stable electric power. The installed capacity is approximately 11,190.4MW, which accounts for 9.2% of the domestic electric power. Out of the total installed capacity, the installed capacity for renewable energy such as mini hydro power, photovoltaic power, fuel cell, wind power, and biomass is 78.5MW, which accounts for 0.7% of the total installed capacity.

Installed capacity **900MW**
Main fuel **LNG**
Power generation volume (as of 2018) **1,233GWh**

Ilsan Coal-Fired Power
(Goyang-si, Gyeonggi-do)

Donghae Bio Fire Coal-Fired Power
(Donghae-si, Gangwon-do)

Installed capacity **400MW**
Main fuel **Anthracite (domestic, imported)**
Power generation volume (as of 2018) **2,193GWh**

Dangjin Coal-Fired Power
(Dangjin-si, Chungcheongnam-do)

Installed capacity **6,040MW**
Main fuel **Bituminous coal**
Power generation volume (as of 2018) **36,223GWh**

Ulsan Coal-Fired Power
(Nam-gu, Ulsan-si)

Installed capacity **3,271.9MW**
Main fuel **Low sulfur heavy oil, Bio heavy oil, LNG**
Power generation volume (as of 2018) **10,694GWh**

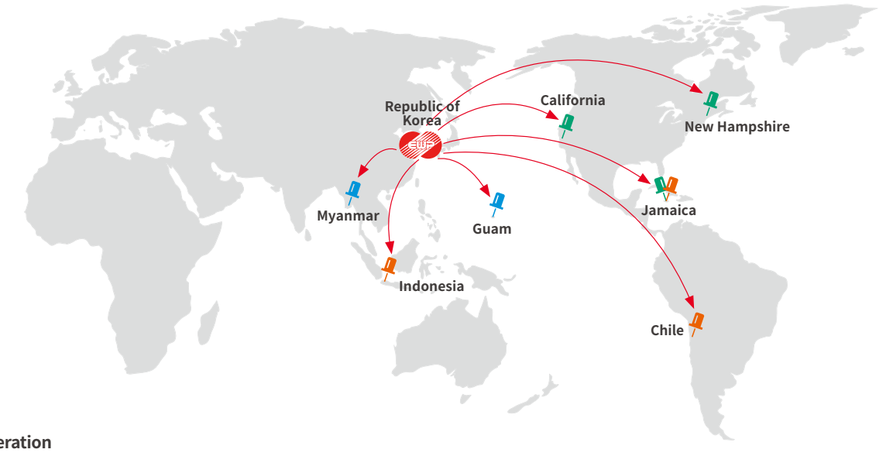
Honam Coal-Fired Power
(Yeosu-si, Jeollanam-do)

Installed capacity **500MW**
Main fuel **Bituminous coal**
Power generation volume (as of 2018) **2,811GWh**

Overseas Business

Korea East-West Power demonstrates its competitiveness by entering into overseas markets based on its accumulated experiences and technologies. In the United States and Jamaica, we operate approximately 752 MW-sized power plants, which include eco-friendly power generation using biomass and natural gases. In Indonesia, Jamaica, Guam, Chile, and Myanmar, new business developments of Korea East-West Power are actively underway. In particular, the distributed photovoltaic power generation business, which will be established in Chile, will be recognized as a clean development mechanism business* and will also be recognized for the reduction of approximately 1.6million tons of greenhouse gas emissions over the next 10 years, thereby securing performance achievements in the Emissions Trading System.

***Clean Development Mechanism (CDM) business:** Refers to the business by which developed countries invest in developing countries to secure performance achievements in reducing greenhouse gas emissions as per the Kyoto Protocol



In operation

Project Name	Capacity	Project Period
Jamaican Electric Power Corporation (JPS) Operation Project	600MW	2011 ~ Present
US EWP RC Operation Project	58MW(biomass), 94MW(natural gas)	2011 ~ Present

Under construction

Project Name	Capacity	Project Period
Indonesian Kalsel-1 Coal-Fired Power Project	200MW	25 years after completion (Completion expected: November 2019)
Jamaican Gas Combined Cycle Project	190MW	20 years after completion (Completion expected: October 2019)
Chilean Distributed Photovoltaic Power Generation Project	105MW	25 years after completion

Under development

Project Name	Capacity	Project Period
Guam Gas Combined Cycle Bidding Project	180MW	25 years after completion
Myanmar Integrated Gas to Power Project	1,500MW	25 years after completion
Myanmar Yangon Gas Combined ROMM* Project	154MW	Undecided
US Gas Combined Cycle Project	953MW	35 years after completion

***ROMM (Rehabilitation, Operation, Maintenance, Management):** Comprehensive performance improvement project for deteriorated power plants

GREEN Energy and Renewable Energy Business for the Future

Total Photovoltaic Power Generation Volume
41.4MW

Total Wind Power Generation Volume
180.1MW

Photovoltaic Power Generation

Korea East-West Power is constructing and operating photovoltaic power generation facilities using a roof top method which does not cause environmental damage by utilizing existing buildings, while driving the growth of the photovoltaic industry through joint developments with private companies.

Busan Shinho Photovoltaic Power	20MW
Dangjin 2 Ash Pond Floating Photovoltaic Power	3.5MW
Dangjin Coal Yard Photovoltaic Power	3.4MW
Donghae Sewage Treatment Plant Photovoltaic Power	2.4MW
Yeosu Gwangyang Port Industrial Complex Photovoltaic Power	2.3MW
Suwon Sewage Treatment Plant Photovoltaic Power	1.5MW
Dangjin Waste Landfill Photovoltaic Power	1.3MW
Gwangyang Port Golden Logistics Photovoltaic Power	1.1MW
Dangjin Floating Photovoltaic Power	1MW
Dangjin Photovoltaic Power	1MW
Donghae Photovoltaic Power	1MW
Dangjin Parking Lot Photovoltaic Power	1MW
Dangjin Material Warehouse Photovoltaic Power	0.7MW
Ulsan Photovoltaic Power	0.5MW
Ulsan 4 Combined Rooftop Photovoltaic Power	0.4MW
Milyang Hope Light Photovoltaic Power	0.2MW
Honam Photovoltaic Power	0.1MW
Total Photovoltaic Power Generation Volume	41.4MW

Wind Power Generation

Korea East-West Power is focused on onshore wind power development and is also contributing to the development of domestic onshore and offshore wind power industrial technologies by undertaking wind power R&D tasks in the west coast region and participating in the construction of offshore wind power complexes, among others.

Younggwang Wind Power	45.1MW
Younggwang Baeksu Wind Power	40MW
Younggwang Offshore Wind Power	34.5MW
Gyeonggju Wind Power Phase 2	20.7MW
Honam Wind Power	20MW
Gyeonggju Wind Power	16.8MW
Younggwang Jisan Wind Power	3MW
Total Wind Power Generation Volume	180.1MW

Korea East-West Power is implementing its 3025 Policy by which it will raise the ratio of installed capacity for renewable energy from the government's target of 20% to 25% by investing approximately KWR 23trillion by 2030 with the aim to become a comprehensive energy enterprise leading low-carbon green management. In the process of converting the coal-fired power generation into an eco-friendly energy source, Korea East-West Power is contributing to the facilitation of domestic economy by expanding on the use of domestic equipment and materials and building connections with local specialized industries. Furthermore, we are creating an energy ecosystem with a focus on realizing social values to ensure increased acceptance among residents of new and renewable energy and the returning of the generated profits to the region.

Total Fuel Cell Power Generation Volume
16.1MW

Total Small Hydro Power Generation Volume
8.2MW

Total Biomass Power Generation Volume
268.9MW

Fuel Cell Power Generation

Korea East-West Power is focused on securing new growth engines by developing domestic and overseas fuel cell businesses and entering into O&M businesses by securing independent technological prowess through the implementation of O&M technology transfers for the new technology fuel cell area.

Ilsan Combined Heat & Power Plant Ⅰ	2.4MW
Ilsan Combined Heat & Power Plant Ⅱ	2.8MW
Ilsan Combined Heat & Power Plant Ⅲ	2.8MW
Ilsan Combined Heat & Power Plant Ⅳ	5.3MW
Ulsan Fuel Cell	2.8MW
Total Fuel Cell Power Generation Volume	16.1MW

Small Hydro Power Generation

Korea East-West Power operates the small hydro power generation facilities utilizing wastewater released from Dangjin Thermal Power Plant.

Dangjin Small Hydro Power Plant Ⅰ	5MW
Dangjin Small Hydro Power Plant Ⅱ	3.2MW
Total Small Hydro Power Generation Volume	8.2MW

Bioenergy Power Generation

Korea East-West Power is constructing and operating a 30MW wood chip biomass power plant, and is also cooperating with local governments for the first time in Korea to develop a 10MW-class biomass power generation business using iron slag as a fuel.

Dangjin Wood Pellet	70MW
Donghae Mixed Fuel Firing	60MW
Ulsan Bio Heavy Oil	40MW
Seokmun Biomass	38.9MW
Donghae Wood Chip Biomass Power Plant	30MW
Sewage Sludge Ⅰ	10MW
Sewage Sludge Ⅱ	20MW
Total Biomass Power Generation Volume	268.9MW

A Sustainable Value Creation Process

Input Value

Financial Value
- Assets: KRW 8.7444trillion
- Equity: KRW 4.6519trillion
- Liabilities: KRW 4.0925trillion

Social Value
- Budget for accompanied growth project: KRW 43.3billion
- Annual investment for social contribution activities: KRW 1.3billion
- Hours of volunteer work per capita: 27.35 hours

Environmental Value
- Environmental improvement investments: KRW 81.5billion('16-'18)
- Investments in new and renewable energy facilities: investment of KRW 23trillion scheduled (by 2030)

Value of Human Resources
- Training hours per capita: 252 hours
- Education and training costs per capita: KRW 3.6million
- Users of flexible working system: 2,229 employees
- Participation in safety culture: 4.55 points

Value of Innovation
- Annual R&D investment: KRW 30.29billion

Manpower
- Worker-centered safety and health management
- Devising of a job sharing strategy

R&D
- Large-scale new and renewable energy R&D
- Devising of a power diversification strategy

Power Plant Construction
- Large-scale new and renewable energy power plant construction

Fuel Procurement
- Stable supply of fuels, including coal and oil
- Procurement of eco-friendly fuels considering the environmental impact

Power Plant Operation
- Stable supply of power to the people

Power Generation Facilities Management
- Reinforce the aging thermal power plants
- Forecasting of major equipment failures

Emissions and Waste Management
- Taking responsibility for air pollutants and waste disposal

Contribution to Local Community
- Coexistence and cooperation with SMEs
- Sharing activities with local residents

Output Value

Financial Value
- Corporate and local taxes: KRW 20billion
- Employees' salaries: KRW 248.7billion
- Shareholder dividends: KRW 1billion
- Community donations: KRW 3.8billion

Environmental Value
- Air pollutant emissions: SOx (10,932 tons), NOx (13,308 tons), Dust (523 tons)
- Waste recycling ratio: 76%
- Renewable energy power generation: 458,420MWh

Value of Human Resources
- Newly hired: 144 people
- Average number of years of continuous service: 16.1 years
- Accident and mortality rate: 0‰

Social Value
- Smart factory supported SMEs: 44
- Energy welfare for the marginalized: 621 households

Value of Innovation
- Jobs created: 552 public sector jobs, 425 private sector jobs
- Savings in bituminous coal procurement: KRW 37billion
- Power generation facilities' failure and breakdown rate: 0.027%

EWP Social Value

Social Value Platform of Korea East-West Power

Korea East-West Power has finally decided on its brand identity in the social value area, which is 'A Vibrant Energy Power Plant' of 'Symbiosis, Collaboration and Empathy.' By setting the goals which translate social value performance achievements into monetary values, we endeavor to secure objectivity and effectiveness in realizing social values. As a public enterprise for energy, we will contribute to the development of communities such as job creation and economic revitalization, and also take the lead in resolving social issues.

Mission — We make energy for happiness

Vision Statement — Eco-friendly energy company enriching the world

EWP Social Value Creation Goal

- 2019~2022, Social Value Performance: **KRW 2.5449trillion generated**
- 2019~2022, Social Value Budget: **KRW 2.5823trillion**

Brand Identity

"A Vibrant Energy Power Plant"

Strategic Direction for Social Values

- Formation of an Economic **'Symbiotic'** Ecosystem
- Leading the **'Joint'** Resolution of Social Issues
- Strengthening the **'Sympathy'** and Emotional Exchange

Area of Focus

- **Energy for Health** — Formation of an eco-friendly life
- **Energy for Happiness** — Regional development and formation of welfares
- **Energy for Coexistence** — Formation of an ecosystem for industrial development
- **Energy for Independence** — Formation of quality jobs
- **Energy for Trust** — Formation of a trustworthy workplace

4 Major Areas of Social Values	Management Goals for 2030	2019~2022 Goals for Social Values	2019~2022 Deployed Budget for Social Values
Advancement of Power Generation Social Value	Total Installed capacity **20GW** Rate of reduction for fine dust **70%**	**KRW 845.4billion generated** ・Forced outage rate: 0.03% ・Main fuel usage unit: 330 tons/GWh ・Rate of reduction for air pollutants: 53%	**KRW 1,608.1billion budgeted** ・Reinforcement value of aged thermal power plant facilities ・Investment value of power generation energy efficiency ・Purchase value of eco-friendly raw materials
Green Future Growth Social Value	Renewable E power generation volume **25%** Weight of new business sales **10%**	**KRW 1,098.6billion generated** ・Distributed power installed capacity: 1.4GW ・Renewable E power generation: 3,300GWh ・1million tons of KOC secured	**KRW 872.9billion budgeted** ・Investment value of new renewable E power plant construction ・Investment value of overseas CDM business
Job Creation and Revitalization of the Local Economy Social Value	Number of jobs created **27,000** **Highest rating** for mutual growth evaluation	**KRW 454.9billion generated** ・Number of direct jobs created: 1,887 ・Increase in mutual growth performance: 15% ・Regional contribution performance: increased by 15%	**KRW 38.8billion budgeted** ・Job project expenses and employee training expenses ・Accompanied growth project cost ・Social contribution project cost
Internal Capacity Social Value	**Integrity level** Accident mortality rate **0‰**	**KRW 146billion generated** ・4th industrial technology business performance achievement ・0 decomposition ・0 accident or death	**KRW 62.5billion budgeted** ・Investment value of 4th industrial technology ・Ethical management project cost ・Safety management project cost

Social Value Performance

Social value creation performance
KRW 364.4billion

Korea East-West Power has converted intangible social value creation performance achievements into monetary values for the increased immediacy of performance and has also motivated people internally. The performance measurement indicators consist of six indicators centered on the main business and six common indicators, and in 2018, we have created a social value performance of KRW 364.4billion. Such performance measurement efforts facilitate setting clear goals and rolling out activities for the future social value creations, and also provide enhanced services to the people through ex post evaluations.

Advancement of Power Generation Social Value

Goals for Social Values	KPIs (Unit)	Performance in 2018	Performance Result in 2018
Contribution to power stability	Forced outage rate (%)	0.027	KRW 79.6 bn
Power plant facilities energy savings	Main fuel usage unit (ton/GWh)	367	KRW 14.7 bn
Reduction of environmental recovery costs	Rate of reduction for air pollutants (%, relative to 2015)	36	KRW 51.2 bn

Green Future Growth Social Value

Goals for Social Values	KPIs (Unit)	Performance in 2018	Performance Result in 2018
Prevention of impediments to public interest	Distributed power installed capacity (GW)	0.5	KRW 68.1 bn
New renewable energy production	New renewable energy power generation volume (GWh)	1,635	KRW 65.9 bn
Securing of overseas emissions right	Secured volume of KOC (overseas carbon emissions right) (ton)	0	KRW 0 bn

Job Creation and Revitalization of the Local Economy Social Value

Goals for Social Values	KPIs (Unit)	Performance in 2018	Performance Result in 2018
Contribution to national income	Creation of direct jobs (people)	977	KRW 26.1 bn
Strengthening of value chain competitiveness	Investment value of mutual growth (KRW 100million)	95	KRW 9.5 bn
Revitalization of regional economy	Investment value of social contribution (KRW 100million)	458	KRW 45.8 bn

Internal Capacity Social Value

Goals for Social Values	KPIs (Unit)	Performance in 2018	Performance Result in 2018
Contribution to economy via technological investment in the 4th industrial revolution	4th industrial technology business performance achievement (KRW 100million)	35	KRW 3.5 bn
Minimization of sales losses due to corruptions	Number of decomposition	0*	KRW 0 bn
Minimization of accidents and deaths	Number of accident or death	0**	KRW 0 bn

* It refers social cost(negative) due to internal corruptions. Thus, a financial goal for social value creation is KRW 0
** It refers social cost(negative) due to deaths in workplace. Thus, a financial goal for social value creation in KRW 0

Special Issue 01

Thinking About the Future of Employees at the Crossroads of Energy Conversion

Korea East-West Power organizes and operates the 'EWP Future Joint Committee of Labor and Management' with the goal of facilitating a safe and clean environment, good jobs, social responsibility and economy for realizing its people-centric social values. The joint Declaration of Labor and Management is evidentiary of our intention and commitment to set an example for coexistence of labor and management based on a future-oriented and sound labor management culture.

In 2019, we introduced a flexible working hours system through a labor management agreement in order to improve the long term working culture for employees and to allow for them to live life away from work after working hours. Furthermore, we have incorporated provisions for improving working conditions in the collective agreement to ensure that a work and family balance can be maintained through the annual leave pre-use system.

Underlying such improvement of the working environment is the effort in communication by Korea East-West Power to heed to the various voices of its employees. To encourage communication between the headquarters and the business locations, the chairman of labor union has visited all business locations in Ulsan, Dangjin, Honam, Donghae, and Ilsan, and has met the workers in person and communicated with them via meetings for onsite communication. Furthermore, through such communication channels as the Future Committee and the Job Committee, we are continuing to establish the labor management relations of coexistence while pursuing the labor management relations of cooperation and participation.

→
2019 Joint Labor Management Declaration Ceremony

Look Inside 1

Pil Seung-Heon
Chairman of the Labor Union

As of the end of 2018, Korea East-West Power's labor union subscription rate was 97.9%, with a total of 1,745 employees subscribed. The labor union of Korea East-West Power strives to perform its social responsibilities as a public enterprise while prioritizing the rights and interests of its members.

In line with the government's plan to close aged coal power plants due to the recent issue of fine dust, Korea East-West Power's Honam Thermal Power Plant and Ulsan Steam Power Plant will shut down their operations. As new construction of coal-fired power plants is not allowed, and as facility performance improvement projects to enhance environmental effects and economy are also not allowed, Korea East-West Power is faced with the crisis of laying off full-time employees and employment stability.

Korea East-West Power has endeavored to produce safe and clean power according to the needs of the people by reducing air pollutants by 35.9% in 2018 and increasing the installed capacity of new renewable energy power generation by 9.3% year on year. We must continue our efforts to take a leap to become an eco-friendly energy company and to prepare a system for job stabilization to prepare for the future of both employees and citizens.

For the sustainable growth of Korea East-West Power, we must establish a new corporate culture in which respecting the people, communities, and the labor force based on a sound labor management culture. Furthermore, we should empathize with residents by resolving current issues of the local communities where power plants are located and also minimize environmental risks by applying the latest technologies to power generation facilities, thereby ensuring the job security of employees through attracting new power plants.

Special Issue 02

The First Power Plant in Korea to Acquire ISO 45001 Certification

Korea East-West Power acquired ISO 45001 (Safety and Health Management System) certification for the first time as a power company in 2019. The Safety and Health Management System is the latest certification system of international standards with which the government announced measures to strengthen workplace safety for public enterprises and actively stressed on the introduction by public enterprises. It is conferred to companies equipped with systems preventing and managing risks, which may arise at workplaces, in advance.

Korea East-West Power posted an accident rate of 0.16% in 2017, and posted 0.13% in 2018. Since 2018, we have introduced the 'Safety Call' system, which is an official safety communication channel, to create a safe working environment for the workers so that experienced workers can voluntarily report on risks and also request for temporary suspension of work for the purpose of protection. All workers entering and exiting the Korea East-West Power's workplaces are guaranteed the rights and special conditions for safety contracts through the Safety Call.

Korea East-West Power has newly installed the organization and system to prevent industrial accidents with the mindset that the workers of partnering businesses are the family of EWP. In order to prevent accidents caused by the coal facility conveyor belt, we have developed a 'conveyor access control system' through which warnings are immediately issued whenever danger to workers is detected by infrared rays.

Korea East-West Power will continue with its best efforts in tandem with its partnering businesses to reaffirm our commitment to prioritizing safety following acquisition of ISO 45001 certification and to create a culture of safety.

→
Exhibition of hand-printed 'Golden Hands of Safety' representing the pledge for culture of safety

Look Inside 2

Jung Byung-Gon
Deputy General Manager of the Disaster Safety General Department

Korea East-West Power has promoted the existing Office of Safety Quality to Safety & Quality Management Division and newly installed the Safety Cooperation Department as the first power company, dedicated to the safety of partnering businesses. Safety Cooperation Department recognizes partnering businesses as partners through collaboration, communication and empathy, and is taking the lead in building and forming safe and happy workplaces.

The year 2018 was one in which Korea East-West Power paved the way for innovating the safety and health management system. The senior management officially declared safety-first management prioritizing the safety of everyone working together, visited business locations across the nation at least once a month to check onsite safety, and listened to the issues from the workers in person.

As a result of such efforts, not even a single material accident took place in 2018, we have achieved the lowest accident rate among the public enterprises carrying out commissioned work. In addition, we won the grand prize at the Best Practice Presentation Contest for the Public Enterprises' Safety and Health Activities in 2019, and also acquired ISO 45001 certification.

Along with instilling safety awareness throughout the company, including partnering businesses, we need to improve the working environment in the field of industrial sanitation moving forward by conducting investigations on the harmfulness of and to prepare protective measures against the chemicals used by Korea East-West Power. Management needs to be supplemented in regards to the potential effect on the workers and working environment spanning from the hiring of expert manpower to the phase of purchasing chemicals and to the phase of using them. When systemic supplementation and the improvement of awareness among workers take place together, everyone at our company will be happy.

Special Issue 03

Increasing Environmental Effect with Floating Photovoltaic Power Plant Using Ash Ponds

Recently, following the government's renewable energy expansion policy and the accompanying efforts to supply renewable energy, some of the photovoltaic projects have been implemented indiscreetly, and consequently, deforestation has emerged as another environmental issue. In consideration of such, Korea East-West Power has planned a floating photovoltaic project by which power may be produced by utilizing the idling water surface of the ash pond reclaiming the cinders burned in the power production process to float the floating object and placing photovoltaic panels over it.

In October 2018, Korea East-West Power held a ceremony for the completion of a 3.5MW-class floating photovoltaic power plant using ash pond for the first time in Korea. KRW 6.5billion in project expenses were invested in the floating photovoltaic power plant installed at Dangjin Thermal Power Plant, and moving forward, 4.5GWh of power is expected for production annually. This is equivalent to the volume of electricity which 1,600 households can use for a year.

The floating photovoltaic power of Korea East-West Power has been measured to achieve a 1,700-ton reduction in greenhouse gas emissions. The completion of the floating photovoltaic power plant is positively evaluated because it offsets mixed views of the local residents concerning the construction of existing renewable energy power plants while making known Korea East-West Power's commitment to the eco-friendly energy business.

In the future, Korea East-West Power will continue to diversify eco-friendly power sources by collaborating with the Korea Rural Community Corporation to promote an 80MW-class 'Lake Daeho Floating Photovoltaic Power Project' and a 200MW-class 'Floating Offshore Wind Farm Complex' using Donghae's gas field infrastructures, consistent with the government's renewable energy policy.

→
Dangjin Thermal Power Ash Pond Floating Photovoltaic Power Plant #2

Look Inside 3

Lee Jung-Mee

Senior Director General, World Wide Fund for Nature (WWF)

The World Wide Fund for Nature (WWF) is an environmental NGO conducting the largest scale of environmental conservation activities that founded its Korea Headquarters in 2014. The Korea Headquarters has set the goal to reduce the corporations' greenhouse gas emissions based on climate science, while conducting activities to protect endangered marine creatures and implementing climate and energy programs to achieve conversion to renewable energy.

First of all, I would like to sincerely welcome the completion of the floating photovoltaic power facilities of Korea East-West Power. The conversion from fossil fuel-based energy sources to clean renewable energy sources is a global trend to realize a low-carbon society and to respond to the climate crisis. Regarding onshore photovoltaic power, it is difficult to resolve the inevitable environmental impact and conflict with local residents. It is a good idea to utilize the idling cinder landfill as a photovoltaic power facility in the small land we have, and we hope to expand it together with other ash pond facilities. However, managing the environmental impact of the landfilled cinder should not be neglected.

In developed countries, renewable energy has already passed grid parity* and reached a point where it is cheaper than conventional coal, oil and nuclear energy. In Korea, this price reversal is one that has been expected, and Korea East-West Power's investment in renewable energy facilities not only raises the social value of the company, but is also a strategic decision needed for the company's survival in the long term. I hope that the company will focus on expanding the renewable energy business portfolio in line with the vision of Korea East-West Power, an eco-friendly energy company enriching the world.

***Grid parity**

The balance point between renewable energy generation costs and conventional fossil energy generation costs

Special Issue 04

Growing Together by Providing Support for the SME Market

In 2008, Korea East-West Power founded the SME Council for the first time as a public enterprise, and has consistently worked with domestic SMEs to develop domestic and overseas sales channels, researched and developed localization, support acquiring patents and certifications, and to pursue onsite validation projects. In particular, we are promoting various support projects, including quality consulting services for SMEs in order to expand their market entry opportunities for SME products having the feasibility to enter the global markets based on excellent technologies.

Korea East-West Power supports accompanied entry overseas by using the power generation company's brand in consideration of the difficulty in gaining overseas export opportunities for the SMEs with relatively smaller delivery performance for the power companies. The average sales of the companies participating in the Korea East-West Power's SME Council have grown by 20% annually over the past 10 years, and their exports overseas have increased five times, from KRW 80billion to KRW 400billion at the present. Moving forward, Korea East-West Power will accompany SMEs in entering overseas markets and will play a leading role in securing national competitiveness in the energy market.

In an effort to form a corporate ecosystem for coexistence, Korea East-West Power has won the status of 'excellent' institution (highest rating) for the mutual growth assessment sponsored by the Ministry of SMEs and Startups for six consecutive years from 2009 to 2014, and has won eight awards, which is the most among public enterprises, by being awarded the status two years in a row in 2017 and 2018. In addition, we have executed the 'Business Agreement for Joint Support of SMEs for Overseas Entry' with KOTRA, which we believe will revamp the efforts of Korea East-West Power's partnering SMEs to enter overseas markets.

→
10th anniversary workshop of Korea East-West Power's SME Council

Look Inside 4

Park Ji-Won
Chief Executive Officer, APM Technologies

Founded eight years ago, APM Technologies is a research-centric small and medium-sized venture company that manufactures equipments for monitoring partial discharge of major power generation and substation equipments. In 2016, we executed a business agreement with Korea East-West Power's Win-Win Growth Center and successfully developed a preventive diagnostic system related to partial discharge, and we are exporting the system to the Middle East, including Saudi Arabia.

As a start-up, it was not easy for us to compete with large domestic and overseas companies from the beginning. In particular, the entry barriers of the power industry were very high for companies which lacked any track record in installation and operation for public enterprises. Through the research tasks of Korea East-West Power, we were able to develop a system for detecting partial discharge signals for transformers and providing signals to the working level officers to prevent accidents such as fire, explosion and power failure, and the fact that we were able to build test beds at power plants such as Dangjin and Donghae was a decisive area of support leading to our market development.

Following the successful completion of the research tasks of Korea East-West Power and its onsite installation, the revenues related to the partial discharge grew by approximately 500%, primarily due to the Saudi Arabian power authority. The standard design was made to use the partial discharge monitoring products of APM Technologies across all substations within Saudi Arabia, and we have also executed long-term agreements with the Saudi Arabian power authority to provide transformer inspection services for the next three years along with the sales of the system.

We believe that supporting and nurturing venture companies and SMEs faced with difficulties in entering the market despite having sufficient technical skills is one of the responsibilities of public enterprises. We look forward to Korea East-West Power continuing to discover significant tasks required at power generation sites, providing test beds, and providing support for promotional activities for overseas buyers, thereby helping to build a virtuous cycle which will lead to exports and sales expansion for small- and medium-sized ventures. Furthermore, we hope that we will join forces in promoting Korea's technological capabilities in the global arena by publishing papers on the results of joint R&D and participating in overseas conferences together.

Special Issue 05

Adding Light to Society with Solar Energy

Korea East-West Power has institutionalized energy efficiency promotion and selected and implemented the six strategic tasks* in line with the three key directions of 'Energy Efficiency', 'Social Value of Energy', and 'New Industry of Energy'. The task of supplying photovoltaic energy to the energy-poor is one of these, and is a most representative social contribution activity which has highlighted the achievements of Korea East-West Power.

The energy-poor are the households which spend 10% or more of their household income on fuel costs, who are often living alone or receiving basic living stipends. In addition, many low income households who cut their energy costs dramatically because of their low income are often excluded from the energy-poor, so they are not easily identified statistically. Korea East-West Power participates in the Solar Energy of Love Committee, which was formed by nine organizations, including Korea East-West Power's Ulsan Headquarters, the Korea Energy Agency, and KBS' Ulsan Broadcasting Station, to help realize the universal energy welfare. Since 2011, we have supplied power free of charge to the underprivileged and welfare facilities to promote energy welfare and implemented the 'Solar Energy of Love Supply Project' supporting energy independence, reaching approximately KRW 1billion and serving 173 households to date.

In 2018, we installed a commercial photovoltaic power facility for HyeJinWon, a social welfare facility for the severely disabled and contributed to the financial independence of welfare facility. The photovoltaic power facility installed at HyeJinWon is of 15kW-class, and approximately 2kWh of electricity is expected for production per year, saving approximately KRW 4million in electricity bills. Moving forward, Korea East-West Power will create social values by practicing energy welfare and laying a foundation for supporting independence through the eco-friendly energy production to ensure that no one will be marginalized for energy in our society.

***Six largest strategic tasks of EWP for energy efficiency**

① Development of Performance Management System
② Development of New Energy Saving Technologies
③ Support for Energy Savings for SMEs
④ Supply of Solar Energy for the Energy-poor
⑤ Peak Reduction ESS Construction Project
⑥ Development of ESS Charge & Discharge Model

→
The social contribution activity of 'Solar Energy of Love' supplying photovoltaic power to the energy-poor

Look Inside 5

Kim Tae-Baek
President of HyeJinWon, Social Welfare Corporation

HyeJinWon, a Social Welfare Corporation, was founded in 2001 and has been in operation for 19 years as a residential facility for the disabled. It is a space for 41 residents aged between 7 and 23. The first encounter HyeJinWon had with Korea East-West Power was when employees of Korea East-West Power volunteered to help out with bathing and serving meals for the residents.

Thereafter, through the Citizens' Forum for Green Energy Promotion, we were chosen to install a photovoltaic power facility on the roof of HyeJinWon as the first social welfare facility. I think that HyeJinWon, a facility for the severely disabled and the underprivileged, was chosen to be the first institution considering the transparency of its operation and the efficiency of the photovoltaic power facility. The installation was made possible with the full support of the Solar Energy of Love Committee, in which Korea East-West Power participates.

Following the installation of the photovoltaic power facility, we achieved electricity generation revenue of KRW 360,000 per month on average, demonstrating savings in facility operation costs. I am very delighted that, with the convenience of use of the air conditioners compared to the past, the residents are increasingly participating in the program even during the hot weather, and volunteers can also participate in a more pleasant environment.

I hope that the Solar Energy of Love Project will be incrementally expanded to low-income families, multicultural families, elderly people living alone, single-person households, and social welfare facilities in the Ulsan region. I also hope that the installation capacity of the power plant can be increased to the highest extent possible, resulting in electricity cost savings for the beneficiaries and leading to an improved quality of life. I ask that Korea East-West Power will continue to make contribute to making our society brighter, warmer and happier.

Strengthening Business Competitiveness through Change and Innovation

Sharing Hope through Local Companionship

Building a 'Symbiotic' Business Ecosystem

Strengthening of Business Competitiveness through Change and Innovation

Sustainability Context

The power generation industry is faced with an increasing demand for new renewable energy and social demand for the shutdown of aged power plants. In addition, the Fourth Industrial Revolution is accelerating changes and convergence across various industries, technologies and knowledge services. Power companies must respond promptly to changes in the energy paradigm, while contributing to economic development via stable power supply by forecasting and preparing for the power demands of society and industry.

EWP Approach

Korea East-West Power is continuously conducting research and development to expand new renewable energy generation, and is also expanding business areas such as smart power plants and integrated solutions to respond to the changes in the industrial structure caused by the Fourth Industrial Revolution. Furthermore, we are also pioneering overseas markets based on our capabilities and experiences gained in the domestic market. In addition, we are providing stable fuel supply through continuous fuel cost reduction efforts.

Link to UN SDGs

7.2 Increase the proportion of renewable energy in the global energy source composition significantly by 2030.

7.a Strengthen the international cooperation by 2030 to promote access to clean energy research and technological development, including renewable energy, energy efficiency, advanced and cleaner fossil fuel technologies, and promote investment in energy infrastructures and clean energy technologies.

EWP Korea East-West Power has set a voluntary goal to increase the share of renewable energy up to 25% by 2030. The targets for each power source such as bio, wind, and solar are disclosed on the website.

EWP Performance

New Renewable Energy Generation Volume in 2018

458,420 MWh

R&D expenses in 2018

KRW 30.29 billion won

Stabilization of Fuel Supply

Social value creation performance

KRW 14.7 billion

Korea East-West Power uses a variety of fuels to generate electricity. We have diversified our supply channels to prevent issues with fuel supply and demand, and have reduced costs via the systematic monitoring of the fuel market.

Current Status of the Fuel Supply and Demand

Korea East-West Power uses a variety of fuels, including coal, heavy oil and LNG, to generate electricity, among which coal is most supplied. Korea East-West Power is expanding the supply of eco-friendly low-sulfur coal to help minimize the environmental impact of coal-fired power generation. In addition, we are increasing the proportion of domestically produced wooden pallets, which is a type of biomass, to help enhance the stability of supply and create an import substitution effect.

Current Status of the Fuel Supply and Demand

Unit: 10,000 tons, 10,000 kl

	2016	2017	2018
Bituminous coal	1,442	1,645	1,506
Anthracite	107	48	93
Heavy oil	119	34	49
LNG	104	108	135
Bio fuel	53	55	53

Efficiency of Inventory Management of Bituminous Coal

Korea East-West Power has achieved a stable power production by achieving efficiency for the inventory management of bituminous coal, which is the main fuel of coal-fired power generation. We have diversified our supplier country portfolio to prevent issues with supply and demand caused by supply and demand risks in certain supplier countries. Meanwhile, in order to reduce the cost of inventory management, we have dualized the appropriate days of inventory according to time-specific power demand. In addition, by exchanging bituminous coal with other power companies, we have been able to reduce the cost of inventory by responding to the risks of supplier countries such as Russia and Indonesia.

Reduced Cost of Purchasing Bituminous Coal

Korea East-West Power has developed a new solution to monitor changes in the bituminous coal market and to apply the optimal purchasing method thereby. This solution reflects the international market and supply and demand forecast for the bituminous coal, and we have participated in the new competitive biddings and adopted purchase methods linked to the international market index. Consequently, we saved a total of KRW 37billion in fuel procurement costs in 2018.

Reducing Cost of Anthracite Procurement for Co-prosperity with Domestic Coal Industry

Donghae Coal-Fired power headquarter is the only plant to use domestic anthracite. Therefore, in order to maintain jobs in mining area and revitalize the local economy, we have actively accepted the high price of domestic coal compared with imported coal. Also, we have expanded the purchase standards of coal import as long as facility stability is maintained, in order to minimize the cost rise in fuel. As a result, we contributed to supporting the domestic coal industry and revitalizing the mining area by implementing 100% of the domestic coal quota while minimizing increase in purchase unit price.

Securing of Competitiveness in Energy Conversion

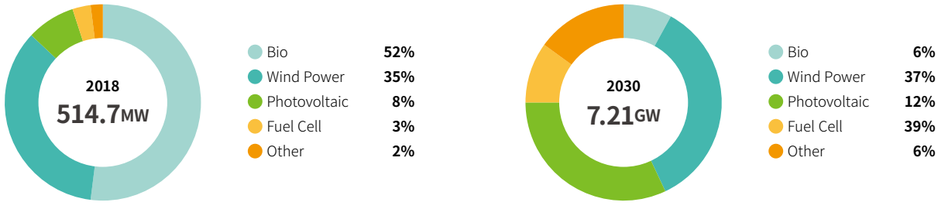
Social value creation performance
KRW 68.1billion

Korea East-West Power has devised the 3025 Roadmap to increase the share of renewable energy generation up 25% by 2030. We are growing into a new energy company responsible for eco-friendly future business by developing various new renewable energy sources such as our large-scale wind power business, floating photovoltaic power business and hydrogen fuel cell business.

Roadmap for the Implementation of New Renewable Energy

Korea East-West Power has set a target, which is 5%p higher than that for the government's new renewable energy power generation volume. We will invest approximately KRW 23trillion to expand the capacity of renewable energy sources, which was 514MW as of end 2018, to 7.21GW by 2030.

Renewable Energy Facility Expansion Plan



111,000 tons
of carbon dioxide reduced

Formation of the Largest West Coast Wind Farm in Korea

111,000 tons of carbon dioxide reducedKorea East-West Power is building large-scale wind and photovoltaic power plants to achieve the 3025 Roadmap. Younggwang Wind Power, which was completed in January 2019, is 79.6MW-class completing the formation of the largest 140MW-class west coast wind farm in Korea. Consequently, we are producing 260,000MWh of power annually and reducing carbon dioxide emissions by 111,000tons. In particular, Younggwang Wind Power Plant is Korea's first farm-type wind farm which can grow rice while producing wind-generated power, thereby contributing to increasing the profits of local farmers.


Taebaek Gadeoksan Wind Power

Eco-friendly Energy Production Together with Local Residents

Korea East-West Power began the construction of the 43.2MW-class Taebaek Gadeoksan Wind Power in 2018. Taebaek Gadeoksan Wind Power is the first large-capacity resident participation project by a public enterprise in which local residents share the business profits by owning a certain equity interest. Consequently, we have secured the acceptance of local residents and minimized delays due to opposition. With the start of the construction of Taebaek Gadeoksan Wind Power in a stable manner, we expect that the East Coast Wind Belt Project, which is a 600MW-class wind farm traversing the East Coast and Gangwon-do region, will proceed without issues.

Social value creation performance
KRW 65.9billion

RPS 100% performed

Building the Offshore Wind Power Plant

With the expansion of renewable energy, Korea East-West Power has installed and operated power plants such as Younggwang Wind Power and Gyeonggju Wind Power, with unlimited capacity to use wind power which does not emit pollutions. In order to lead offshore wind power, which is attracting attention given its limited installation space and the lack of noise pollution, we have executed the 'Donghae 1 Floating Offshore Wind Power Project Implementation Consortium.' The 200MW-class floating offshore wind farm, which will be installed offshore in Ulsan, can utilize the rich wind resources of the vast sea, generate more electricity, and the offshore installation brings the advantage of minimizing risks such as grievances, fishing rights, and visual pollution.

Renewable Energy Capacity

	2016	2017	2018
Renewable Energy Capacity	91.1MW	129.1MW	140.7MW
Renewable Power Generation Volume	318,520MWh	388,209MWh	458,420MWh
RPS* Performance Rate	100%	100%	100%

***The renewable energy mandatory supply ratio (RPS):** A system which requires power generation business operators (required suppliers) equipped with power generation facilities of 500MW or more to supply more than a certain percentage of the total power generation by using renewable energy


Bird's-eye view of Daesan Hydrogen Fuel Cell Project

Building a Hydrogen-Based Society

Korea East-West Power is pursuing a hydrogen based fuel cell project in order to pace with the government's 'hydrogen economy facilitation roadmap' and successfully convert energy. In 2018, we began the construction of a 50.2MW-class hydrogen fuel cell project location, which is the largest in Korea. In particular, this location has the advantage of being able to economically utilize the byproducts of hydrogen generated in the petrochemical process for being formed within the plant of Hanwha Total, a petrochemical company. By 2030, Korea East-West Power will invest KRW 4.7trillion to continue research related to hydrogen fuel cells and achieve an energy production volume of up to 1GW.

Conversion to Eco-Friendly Fuel

As the social demand for fine dust reduction continues to grow, Korea East-West Power is pursuing fuel conversion using LNG and renewable energy in lieu of coal for some coal-fired power plants. Dangjin Eco Power Co., Ltd., which is a coal-fired power plant, plans to convert into a natural gas power plant using LNG as a fuel source, and the existing site will be used for implementing new renewable power generation facilities such as photovoltaic and ESS. In addition, Honam's aged coal-fired power plant will be converted into a natural gas power plant, while the idling site will be used as a biomass renewable power plant which uses unused forest byproducts as a fuel for conversion, thereby achieving conversion into an eco-friendly integrated energy complex.

Using Waste Resources to Develop Energy

Korea East-West Power is pursuing a livestock manure biomass development project to prevent the 'soil and water pollutions caused by livestock manure' and to achieve smooth livestock manure treatment to 'increase the number of livestock animals for farmers.' To this end, we have conducted our own R&D on fuel development and combustion characteristics of livestock manure since 2018, and are working with the government and local governments to establish policies and to build a fuel supply and demand network, etc.

Leading the Fourth Industry in the Field of Power

Social value creation performance
KRW 3.5billion

Korea East-West Power is leading the Fourth Industrial Revolution in the power generation industry. We have declared the Industry 4.0 Implementation Master Plan and are pursuing the four largest strategic directions and ten largest tasks.

Industry 4.0 Master Plan

Industry 4.0 aims to create new businesses for the future such as the implementation of smart power plants and development of an integrated power generation operation platform by utilizing Korea East-West Power's internal power generation operation system, professional manpower in power generation technology, operation-related know-how and a business database. Based on this master plan, Korea East-West Power will invest approximately KRW 62billion by 2023 to create an economic value of approximately KRW 202billion.

Industry 4.0 Master Plan

Goal	Global Leader in the Fourth Industrial Revolution	
4 Largest Strategic Directions	Intelligent safety and environmental management	Implementation of intelligent digital power plant
	Creation of Industry 4.0 ecosystem	Expansion of digital infrastructures
10 Largest Strategic Tasks	Improving environmental performance of power plants by developing optimal operating technology for environmental facilities	Advance safety management system by intelligent worker safety management
	Blocking risk factors by performing dangerous work unmanned	Settling the operation of artificial intelligence based real time remote sensing diagnosis center
	Advance asset management system which integrates Industry 4.0 new technology	Preempting new energy business by developing new renewable operating technology
	Facilitating test beds and improve regulations to foster Industry 4.0 companies	Achieving open innovation via disclosing power generation data and know how
	Expanding IT infrastructures for digitization	Strengthening digital core specialized expertise

Power generation operation platform brings
KRW 3.5billion of cost reduction

Construction of Integrated Platform for Power Generation

Operating a single power plant requires over 50,000 components, 500 sensors and hundreds of CCTV cameras. In order to operate a power plant stably and efficiently, it is essential to systematically and comprehensively manage large quantities of parts and sensors. Korea East-West Power has built an integrated platform for power generation operation consisting of a remote monitoring system (e-Brain center) which utilizes rich plant operation experiences and accumulated databases and a big data platform for system performance improvement and optimization analysis. Consequently, we have developed 132 forecasting models, yielding a cost reduction of KRW 3.5billion in 2018.

Creation of Industry 4.0 Ecosystem via Entry into the ESS Solution Market

As the fourth industry and ICT-based industries become more active, the importance of energy storage devices (ESS), which can supply electricity efficiently, has also been pronounced. As a part of its consulting and solution products, Korea East-West Power has developed an ESS operating solution (MSP) which analyzes power usage patterns using Big Data and supports the optimization of ESS facilities. In 2018, we executed an agreement with Dongkuk Steel to provide ESS MSP, which is expected to reduce electricity bills by a total of KRW 60billion.

Expansion of Overseas Business

Korea East-West Power is expanding overseas development projects to secure future growth engines and grow into a global company. We are expanding the scope of our business by constructing power generation facilities and providing integrated solutions utilizing our experiences in power plant operation.

Winner of the 'Power Plant of the Year' at the 15th Asian Power Awards

Implementation of Overseas Development Projects

The 200MW-class Indonesia Kassel-1 Fluidized Bed Power Plant, which is applying Korea East-West Power's 25 years of know-how in power generation and process management, has achieved 98% of the overall process target and has been selected as an excellent power plant in the Asian region by the 'Asian Power Awards'. In Jamaica, we built Jamaica's first gas combined cycle power plant and succeeded in the first power reception* in 2018. Korea East-West Power plans to expand its overseas power generation capacity to 2,180MW by 2030 by continuously implementing overseas projects.

***Power reception:** Reception of power for full-fledged operation following the completion of the installation construction of various power generation facilities such as transmission lines

Share of Each Overseas Business Fuel

	2018	Target for 2030
Overseas Power Generation Capacity	410MW	2,180MW
Renewable	17%	30%
Natural Gas	34%	54%
Coal	-	6%
Oils	49%	9%

Chilean CDM acknowledges
1.6million tons
of greenhouse gas reduction

Implementation of the Overseas Photovoltaic Business

Korea East-West Power has endeavored to implement the first overseas photovoltaic power business in Chile. The project, which is jointly conducted with Daelim Energy, is expected to be conducted as distributed photovoltaic power with a total installed capacity of 105MW across twelve business locations in central and northern Chile. In addition to pioneering overseas markets, the project was recognized as a Clean Development Mechanism* project, and was recognized for the reduction of 1.6million tons of greenhouse gas emissions over the next 10 years, followed by securing carbon emission rights thereto.

***Clean Development Mechanism (CDM) business:** Refers to the business by which developed countries invest in developing countries to secure performance achievements in reducing greenhouse gas emissions as per the Kyoto Protocol

Overseas Sales of Solutions

The sales of integrated solutions are a new business area based on the experiences and competencies of Korea East-West Power. Korea East-West Power is diversifying its revenue structure by selling integrated solutions related to plant operation and maintenance not only in Korea but also overseas. We have built a facility and material master consulting, maintenance and operation information system at the Kassel-1 plant in Indonesia, and have recorded KRW 600million in sales by providing solutions to identify and resolve current issues by area at the Aaron Power Plant in Myanmar.

Sharing Hope through Local Companionship

Sustainability Context

As a member of the social community, an entity has the social responsibility to contribute to the sustainable development of local communities and to pursue mutual growth with SMEs and small merchants. As the interest of people in corporate social responsibility has increased, the expansion of main business-based social contribution and participation for various stakeholders may also affect corporate sustainability and growth.

EWP Approach

Korea East-West Power provides energy welfare to local communities and creates jobs related to new energy businesses based on the main business of energy generation. In order to achieve mutual growth with partnering businesses, an exclusive organization has been formed, and the growth of SMEs is encouraged by supporting technological development and capacity enhancement.

Link to UN SDGs

8 DECENT WORK AND ECONOMIC GROWTH

8.3 Encourage the formation and growth of small businesses and SMEs, including the promotion of development oriented policies which support production activities, creation of quality jobs, entrepreneurship, and creativity and innovation, and expansion of access to financial services.

8.6 Significantly reduce the proportion of young adults who are not participating in education or training or are unemployed by 2020.

EWP Korea East-West Power intends to expand the absolute quantity of jobs and improve the quality of jobs together. This year, we have focused on job sharing, creating new jobs and reducing long working hours.

EWP Performance

Personnel converted to full time

404 people

Cumulative Personnel Participating in the ‘Blood Drive of Love’

3,427 people

Mutual Growth with SMEs

Social value creation performance

KRW 9.5billion

Korea East-West Power practices fair trade and supports technological development and pioneering domestic and overseas markets to create an ecosystem of coexistence with SMEs. By supporting the establishment of social enterprises, we are also contributing to resolving local issues and creating greater social values.

Building a Mutual Growth Support System

Building the Mutual Growth System

To achieve mutual growth with SMEs, Korea East-West Power has established a strategic system aimed at building an ecosystem of coexistence and specified the ten largest tasks. We will create greater social values by investing KRW 100billion in R&D expenses for localization technologies and nurturing 100 venture companies.

Goal

Lead mutual growth of public enterprises by building an ecosystem with SMEs

Strategic Direction

Settlement of convergence technological development based on the 4th industry	Support market development domestic and abroad	Operate SME job creation program	Bridging the wage gap between large and SMEs
2018 Strategic Tasks			
• Support convergence and complex technological commercialization • Enhance productivity with smart factory	• Expand onsite application of domestically developed products • Pioneer overseas market for core parts	• Nurture youth startups and venture companies • Support job creation projects	• Pilot operation of future performance sharing system • Support welfare improvement for employees

10 Largest Tasks

Expand R&D for localization technologies and invest KRW 100billion	Nurture 100 venture companies and 30 new startups
Provide KRW 3billion for 30 smart factory companies for the 4th industry	Discover and nurture 30 smart factory companies for the fourth industry
Support 90 companies for enhancing productivity of partnering businesses	Achieve KRW 1trillion of direct purchase for SME products
Achieve KRW 100billion in exports by developing overseas markets	Nurture local companies for creating good jobs
Nurture 10 hidden champion companies	Achieve excellent evaluation for mutual growth 10 times

Operation of Dedicated Mutual Growth Organization

Korea East-West Power communicates with SMEs through the Win-Win Growth Commission and the Win-Win Growth Center. The Win-Win Growth Commission makes decisions and advises on the relevant policies and strategies, while the Win-Win Growth Center implements such policies.

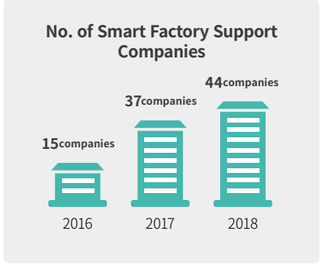
Support for Enhancing the Capabilities of SMEs

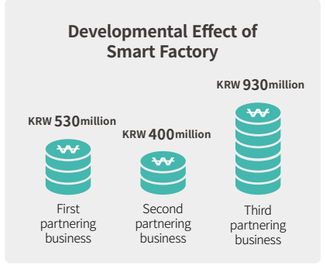
Superior Institutions for Shared Growth of SMEs

Support for Core Technological Development of the Fourth Industry

SInce 2017, Korea East-West Power has supported the establishment of smart factory* for the fourth industry type of SMEs. In 2018, in addition to the first partnering businesses, we had the second and third partnering businesses participate in implementing support projects in line with the size and characteristics of each business.

***Smart factory:** an intelligent production plant which improves productivity, quality, and customer satisfaction by applying information and communication technology (ICT) combined with digital automation solutions across production processes such as design, development, manufacturing, distribution, and logistics





Discovered **30**
potential export companies in 2018

Nurturing Export Companies

Korea East-West Power provides export support programs customized to the growth phase of SMEs. SMEs are classified into potential export companies, silk road companies (export of KRW 1billion or less), and power silk road companies (export of KRW 1billion or more) according to the growth stage and export size. In 2018, the potential export companies entered new markets in four countries and generated KRW 19.9billion in exports.

Details of Support

Potential export company
- Offer opportunities for joint R&D and commercialization
- Support customized program for overseas entry such as support for the overseas patent acquisition

Silk road company
- Support target country selection and local marketing
- Support overseas vendor registration and acquisition of certification

Power silk road company
- Consult direct purchase via direct visit to the corresponding country
- Expand market share via product localization support

Contributing to Bridging Wage Gap between Large and SMEs

Korea East-West Power has endeavored to bridge the wage gap between large companies and SMEs to strengthen the capabilities of SMEs. In particular, through the 'Korea East-West Power's Future Performance Sharing System', we have paid out incentives of KRW 7million per capita to excellent employees of partnering businesses. Through this effort, we have helped SME employees to benefit directly from the performance sharing system and to bridge the wage gap.

Hosting Startup Contest

Support for Nurturing Social Enterprises

Korea East-West Power promotes mutual growth with various companies by supporting the fostering and growth of social enterprises as well as providing support for the capacity building of partnering businesses and SMEs. In 2018, we hosted the Social Economy Academy and Startup Contest for two consecutive years and supported KRW 30million for project development expenses.

Expansion of Fair Trade Culture

Increasing Advance Payment Rate and Expanding Coexistence Payment System

Korea East-West Power has raised the advance payment rate and expanded the coexistence payment system to enhance the financial stability of partnering businesses. Korea East-West Power raised the advance payment limit to 80% and shortened the payment deadline from fourteen days or less to five days or less to ensure that the supply of money to SMEs is facilitated. The coexistence payment system contributes to securing the financial stability of partnering businesses by allowing the second and third partnering businesses to cash the goods immediately at the bank using Korea East-West Power's credit rating. In 2018, a total of KRW 131.8billion was paid out through the coexistence payment system.

Expansion of Suppliers' Rights and Interests

The 'hierarchical client-supplier culture' of the bidding process has emerged as a social issue. Korea East-West Power has enacted a standard construction contract to ensure the rights and interests of the bidding participants. By defining in detail the terms and conditions of the existing contract and the subjects of design changes, it is now possible to prevent disputes which may arise during the implementation of contracts, and the expenses of licensing and authorization are calculated separately or are to be borne by the client to ensure that the practices of shifting the expenses to the contracting party are curbed.

Creation of Jobs

Social value creation performance
KRW 26.1billion

Korea East-West Power created 552 jobs in the public sector and 425 jobs in the private sector in 2018 as a strategy for creating quality jobs through its core businesses. Internally, we have focused on job sharing to help reduce long working hours for the existing workforce and to create new hiring practices.

Development of Job Creation Promotion Strategy

Korea East-West Power has devised a strategic plan for realizing social values by reflecting the job creation goal for 2018 among management goals for the first time. This is another step towards achieving the mission of 'Creating Jobs for Respecting People for a Good Life Together, with More Time To Spend Away from Work'.

Job Creation Strategy

Goal	**Create 27,000 quality jobs centered on main business, perceivable by the people**	
Strategic Direction	**Improvement of job quality**	**Expansion of job quantity**
Strategy Task	Development of business management infrastructures to create sustainable jobs Minimization of part-time positions for workplaces without discrimination	Expansion of public sector jobs via sharing and innovation of main business Creation of private sector jobs using resources held and capabilities

Mid-term Roadmap for Job Creation

	Introduction (~ 2018) Job sharing	Growth (2019-2020) Job creation	Leap (2021~2022) Addition of jobs
Classification Conversion to Full-Time			
Public Sector Job Creation	· Establishment of conversion plan & formation of promotion organization · Confirmation of conversion target & completion of conversion	· Discrimination of conversion employees & implementation of improvement of treatment · Advancement of personnel system & establishment of principles	· Operation of 'zero' part timers · Establishment of excluded persons & measures for private sector consignment
Private Sector Job Creation	· Improvement of work shifts and long-hour working conditions · Systematic management of full-timers and part-timers	· Continued development of jobs appropriate for selected hours · Development of business centered on eco-friendly LNG	· Creation of future jobs which never existed (Innovation of main business & utilization of fourth industry technology)
Classification	· Enhancement of eco-friendly and future technology capabilities · Construction of foundation for the realization of social values	· Creation of eco-friendly private sector jobs · Creation of ten social economy and corporate models	· Expansion of jobs by realizing fourth industrial technology · Creation of fifty social economy and corporate models

Operation of the Organization Dedicated to Job Creation

Korea East-West Power has formed and operated a 'Job Placement Council' where labor and management participate together to achieve the goal of creating company-wide jobs. The Job Placement Council, co-chaired by the CEO and the chairman of the union, is responsible for establishing strategies and policies for job creation. In 2018, we also created the 'Social Values Promotion Division', operating directly under the office of the CEO, to oversee the creation of public and private sector jobs.

Joint Labor Management Declaration for Creating Good Jobs

- Operate the Joint Labor Management Job Placement Committee to increase jobs, reduce working hours and improve quality of employment
- Create new jobs by leading the fourth industry and energy conversion
- Build a 'job creation model led by a public enterprise' through the labor management compromise via job sharing
- Prohibit discrimination against part-timers such as converting them to full timers for all time and continued performance of duties and directly promote indirect hiring
- Promote systemic innovation for the realization of a people-centric, labor-respectingsociety via the labor management cooperation

Establishment of EWP Service to Convert Part-Timers to Full-Time Employees

Minimization of Part-Timers

Korea East-West Power observed the government's guidelines on the conversion of full-time employees and also achieved exemplary full-time conversion through the consensus among stakeholders. According to the characteristics of each job, twenty-four labor, management and expert council meetings were held, through which an agreement was reached to convert 404 workers to full-time. We also endeavored to reflect the opinions of stakeholders by holding ten onsite briefing sessions to help resolve conflicts among salaries and the age of retirement according to occupations by and between full-time and part-time workers' unions.

Improvement of Long Working Hours and New Hiring

Korea East-West Power has improved working conditions for those working long hours, thereby reducing working hours and creating jobs. The 'Job Sharing Group' was established to improve the working conditions for those working 42 hours per week and 24 hours overtime (person/month), and those newly hired were applied 40 working hours per week and 7 hours overtime (person/month), resulting in hiring 72 new people.

Expansion of Job Creation by Issuing Sustainable Bonds

Korea East-West Power has expanded external job creation and secured sustainability. In 2018, we were the first Asian enterprise to successfully issue USD 500million of sustainable bonds*, raising capital to invest in job creation. Korea East-West Power plans to invest the capital raised in renewable energy R&D and eco-friendly facilities to create quality jobs. In 2018, we invested KRW 139.9billion, creating a total of 306 direct jobs. Based on such achievements, Korea East-West Power won the 'Republic of Korea's Best Sustainable Bond Award' presented by The Asset, a financial publisher of Hong Kong, at The Asset Triple A Country Awards 2018.

***Sustainable bond:** A special-purpose bond used only for social value projects such as job creation and eco-friendly technological development

Job Creation Performance Achievements in 2018

Unit: People

Classification		2017	2018
Public Sector	Conversion to Full Timer	4	404
	New Hiring of Public Sector Jobs	99	148
Direct Creation of Private Sector Jobs		72	425

Winner of 'Republic of Korea's Best Sustainable Bond Award' presented by Hong Kong financial publisher

Community Involvement & Social Contribution

Social value creation performance
KRW 45.8billion

As a public enterprise, Korea East-West Power continuously carries out social contribution activities to perform its social responsibilities and meet the demands of society. We will support customized activities in line with the life cycle of beneficiaries and will also contribute to the economic development of the local community.

Expansion of Consensus via Community Involvement

Social Contribution Implementation System

Korea East-West Power aims to become a 'trusted energy company which performs its social responsibilities through sharing' and is also carrying out social contribution activities under the three strategic directions of 'Social Contribution in Connection with Industry', 'Meeting Social Demands', and 'Expanding the Culture of Sharing'.

Vision	A trusted energy company which performs its social responsibilities through sharing
Slogan	Energy for a Dream of Happiness
Strategic Task	**Social Contribution in Connection with Industry** • Strengthen energy welfare • Carry out social contribution activities of CSV type **Meeting Social Demands** • Lay out the foundation for job creation • Revitalize the economy **Expanding the Culture of Sharing** • Make social contributions customized to life • Provide support to local communities

Contributing to Revitalizing the Local Economy

Korea East-West Power recognizes that it is an important social responsibility to contribute to revitalizing the local economy. In 2018, we executed an agreement with the city of Ulsan to promote the energy plus city (e+City) to revitalize the local economy centered on the energy industry and to create quality jobs. Through the 'Energy Plus City', we plan to invest KRW 8trillion in the city of Ulsan by 2030, create 10,000 jobs, strengthen mutual growth with SMEs, and increase the local rate of employment of young adults by 30%.

Energy Plus City Implementation Strategy

Details of Project	**Nurturing of the Industry** • Energy efficiency development (ESS) business • Support for shipbuilding partnering businesses **Innovative Startup** • New Growth Nurturing Fund • Support for discovering smart factory **Strengthening of Capability** • Open campus of community college • Customized current system for work and study **Coexistence of the Region** • New renewal e specialized theme project • Participation in the urban regeneration project
Result	KRW 8trillion invested and 10,000 local jobs created (~2030)

Expansion of Local Community Energy Welfare

Korea's East-West Power provides energy vouchers for the next class of people held in the blind spots of energy welfare to subsidize electricity, city gas and district heating usage fees, as well as winter supplies. In 2018, we provided a total of KRW 80million of energy voucher funds. By collaborating with public enterprises such as the Korea Workers' Compensation and Welfare Service, we have installed photovoltaic power plants at idling sites of public enterprises, and have used the generated revenue for extending health and medical support for the vulnerable classes.

Expansion of the Culture of Sharing

Voluntary Social Contribution Activities

Korea East-West Power organized the Korea East-West Power Social Volunteer Corps under the slogan of 'Hand of Love, Light of Hope', and has been carrying out continuous and systematic social contribution activities since 2004. The Korea East-West Power Volunteer Corps seeks to create values for the local community and marginalized neighbors in the four areas of 'Energy for Hope', 'Energy for Smile', 'Healing Energy', and 'Clean Energy'. The 'Blood Drive of Love', which has been held every year for sixteen years, is representative of the company-wide voluntary social contribution activities, with a total of 3,427 participants on a cumulative basis as of 2018.

EWP Social Contribution Activities: Energy for a Dream of Happiness

Area	Energy for Hope	Energy for Smile	Healing Energy	Clean Energy
Goal	• A world in which everyone can be happy • Love, the energy to share tomorrow	• Two hands holding those of the local residents, Energy for happiness with a smile	• Priceless emotion forming gracefulness of heart, healing energy to share together	• Korea East-West Power's hard work and dedication for the environment and local community
Activity	• Blood Drive of Love • Electrical Science Camp	• Volunteer activities of filial duty for senior citizens • Formation of environment for the facilities of the disabled	• Walking trails with the disabled • Healing camp for social workers	• Installation of eco-friendly energy facilities • Environmental protection for one mountain by one company

5,000 Yellow Cards Donation for Children Traffic Safety

Aid of Lunch Box & Water for Forest Fire Damage of Gangwon Province

Social Contribution Customized for a Lifetime

Korea East-West Power has carried out social contribution activities customized for the life cycle of beneficiaries. Classified into childhood, adolescence, and senescence, we have supported traffic accident preventive activities such as improving crossings and supplying transparent umbrellas, and the treatment of leukemia and childhood cancer. For adolescents, we have provided educational support for low-income students and free semester programs to provide equal educational opportunities. As for senescence, to help resolve issues caused by the abuse of elders and dementia, which have become social issues, we have provided support for preventing the abuse of elders, dementia campaigns in conjunction with dementia centers, and dementia awareness improvement activities.

Social Contribution Performance Achievements in 2018

Classification	No. of Support Activities	Amount of Support (KRW million)
Dangjin	150	503.7
Ulsan	146	639.0
Yeosu	34	26.3
Donghae	31	64.1
Ilsan	41	36.4

Strengthening of Communication and Cooperation with Local Residents

Korea East-West Power conducts community involvement activities to build a consensus with the local communities where the headquarters and five business locations are located. Every month, we have designated the 'Day of Going to Traditional Market' to help encourage employees to use the local traditional markets. During the outbreak of the 'Gangneung Wildfire', which resulted in many victims and property damages, we provided KRW 10million in donations and delivered one thousand lunchboxes.

Leading the 'Joint' Resolution of Social Issues

Sustainable Power Generation Keeping People in Mind

Sustainability Context

The people's voice demanding the strengthening of safety management for the thermal power industry is increasingly growing. The government has been pursuing the revision of the Occupational Safety and Health Act for the first time in 28 years, and power companies have also established safety measures to improve their systems and processes to ensure that workers can work in safe workplaces.

EWP Approach

Korea East-West Power practices worker-centric safety and health management to prevent industrial accidents. Considering that most disasters occur at partner businesses, we are making efforts to identify and improve onsite risk factors through communication with the workers of partnering businesses. The accident rate of Korea East-West Power's contracted construction projects has consistently declined over the past five years, and we have recorded the lowest industrial accident rate for contracted work in 2018.

Link to UN SDGs

11.b Adopt an integrated policy plan for the inclusion, resource efficiency, climate changes and adaptation, and disaster resilience, and implement global disaster risk management across all levels by 2020.

EWP We prioritize the lives and safety of those working together rather than profitability, and also operate an intelligent integrated disaster information system to respond to disasters such as fires, explosions and earthquakes. We seek to ensure the safety of the workers and the local communities by identifying defects in power generation facilities and preventing accidents.

EWP Performance

The first power company to acquire
ISO 45001
certification

Accident rate for contracts
Lowest among public institutions

Strengthening of the Power Plant Safety

Social value creation performance
KRW 79.6billion

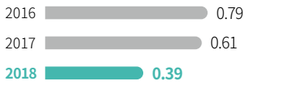
Intensive inspection of the power plant's core facilities is an essential activity to ensure the stable supply of electricity to the public and to ensure the safety of workers. Korea East-West Power endeavors to minimize long-term and short-term failure of generators by analyzing past failures and breakdowns and establishing preventive measures. We have won the grand prize for safety management two years in a row and have also been selected as an excellent organization in the disaster management evaluation.

Forced Outage Rate* Unit: %

Classification	Rate
2016 Performance	0.062
2017 Performance	0.039
2018 Goal	0.035
2018 Performance	0.027
2019 Goal	0.033
2021 Goal	0.030
2023 Goal	0.027

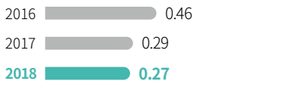
*Hours of failure and breakdown/calendar day and time×100

Equivalent Forced Outage Rate* Unit: %



*Hours of failure/(Operation + Hours of failure)× 100

No. of Failures Per Generator* Unit: failures/generator



*Total number of failures/Total number of generators

Prevention of Facility Failure

Prevention of Long-Term Failure*

Korea East-West Power has analyzed the system failure patterns from 2013 to 2015, and has also focused on the activities of intensively inspecting core facilities such as turbines and boilers. By establishing a vibration monitoring system using fourth industry technology, we have remotely monitored the vibrations of turbines and pumps, etc., and have performed precise inspections using robots and ultrasonics to detect facility defects in advance.

***Long-term failure:** a failure which hinders power generation for ten days or longer

Prevention of Short-Term Failure

As a result of analyzing the causes of ten short-term failures which occurred in 2017 using the HOPE+* method, we have discovered that 50% of the shutdowns were caused by 'facility defect' and 31% of them were caused by 'human error'. Korea East-West Power has provided for the fundamental measures for short-term failures by implementing three-phased facility management of securing the quality of materials, strengthening facility diagnosis, and enhancing advance monitoring, and we have provided training and check sheets to enhance the capabilities of workers.

***HOPE+ analytical method:** A combination of the words 'human, organization, procedure, and equipment', it is an investigative method to determine the cause of failure developed independently by Korea East-West Power

Advance Prevention of Failure

We are innovating in the area of failure forecasting systems by operating the e-Brain Center, which provides real-time and remote monitoring services (RMS) for the status of power generation operation combining the know-how of power generation facilities for 'design + operation + maintenance'.

Building of the Disaster Safety and Health System

Korea East-West Power strives to minimize damages in the event of disasters by prioritizing disaster preparation in the order of fire, explosion, and earthquake, and by establishing an intelligent integrated disaster information system. We have conducted spatial safety risk assessments to check the risks of fire and explosion, strengthened twenty-three vulnerable facilities at Dangjin Thermal Power Plant, and completed seismic reinforcement of twenty-two buildings at Donghae Thermal Power Plant in preparation against strong earthquakes. In order to effectively respond to emergency situations, we also conducted a total of five disaster drills in 2018 by using ICT devices such as CCTV, TRS* communication equipment, and wearable cameras. In the disaster management assessment conducted by the Ministry of Public Administration and Security, we were the only company to acquire an excellent rating among the power companies.

***Trunked Radio System (TRS):** Common frequency communication system

Enhancing the Safety of Workers

Korea East-West Power prioritizes the lives and safety of the people we work with above and beyond all other values. In 2018, we focused on strengthening the independence of our safety department and ensuring the safety of all our workers, including those of the partnering businesses. We are conducting R&D to improve prevention of major disasters which are difficult to prevent with manpower with safety systems using fourth industry technology.

Preemptive Setting of Goal for Accident Fatality Rate

The government announced a plan for strengthening workplace safety for public enterprises with the goal of reducing the rate of accident fatalities by half. Korea East-West Power responded preemptively, aiming for a 0‰ accident fatality rate and established a long-term roadmap until 2024. We have also newly enacted a standard for requiring two people to work at power plants and prohibiting a single person to work for those who have served for less than six months.

Analysis of Significant Accidents & Customized Safety Measures

Korea East-West Power has carefully analyzed the accidents which occurred during the last ten years and also categorized them into three major accidents. Consequently, the types of frequent accidents were classified into electric arc (1st, 50%), falls (2nd, 15%), and accidents by jamming (3rd, 7%). We endeavor to protect the workers as much as possible by introducing the facilities and devices for enhancing safety for each type.

Electric arc, the largest significant accident

Strengthening the protection of workers by introducing safety safeguards on a phased-in basis

Remote control	Fire control	Flame resistance	Suffocation prevention
Blocking sources of explosion and burns Developing and applying remote breaker withdrawing and deploying device company wide	**Preventing expansion of accidents** Installing automatic fire extinguishing system exclusively for circuit breakers (791 locations)	**Directly protecting the human body** Requiring supply and wearing of fireproof clothing (326 sets)	**Follow-up management** Completing furnishing air respirators at the (outside) entrance to electrical room

Falls, the second-largest significant accident

Minimizing the risks of falls and collapse by improving furnace scaffold

Lower support system scaffold (before improvement)	Upper support wire rope scaffold (after improvement)
• 1.5 tons of allowable load causes a high risk of shaking and falling • Risk of collapse is relatively high due to the concentration of load at the bottom	• 4.0 tons of allowable load reduces the risk of shaking and falling • There is no risk of collapse by load distribution

Jamming, the third-largest significant accident

Blocking internal entry and exit for equipment scheduled for commissioning

Breaker lock	Warning light in operation	Access check valve installation
Blocking motor operation by installing a lock on the breaker's driving unit, etc.	Enabling intuitive judgment of whether work is underway inside by installing warning lights inform about the internal space work.	Blocking arbitrary entrance of workers by installing and locking the arbitrary access check valve of manholes

Expansion of Safety Construction Period for Maintenance Work

Overhaul period refers to the period for regular facility inspection and maintenance to maintain the generator's performance and prevent various causes of failure of equipment. Korea East-West Power listened to the voices of workers that the overhaul period has been set tightly for profitability, and so we have introduced the 3 to 6 day additional work period, that is, we are the first power plant to introduce a safety construction period. In 2018, we expanded the application of the safety construction period to all generators and shared such efforts with other power companies, thereby contributing to strengthening safety management and reducing the risk of accidents caused by worker fatigue.

Discovering Detailed Risks in the Workplace

Korea East-West Power has strived to identify potential risks to workers more precisely by changing the risk assessment method for the working environment. We have focused on finding detailed risks for each phase of work by switching from the 4M (Man, Machine, Media, and Management) method, which evaluates the environmental risks of the manufacturing industry with relatively less process changes, to the Job Safety Analysis (JSA) method, which evaluates the workers' behavioral risk from time to time. The JSA risk assessment was applied to all construction and maintenance work performed in 2018, and after the JSA assessment, no accidents occurred during the overhaul work performed.

Composition of the Safety Management Committee

Korea East-West Power has launched anew the Safety Management Committee in 2019 to review matters concerning human life and disaster management and to seek advice on safety and health systems. The Safety Management Committee consists of a total of seventeen people, including a group of experts such as the head of Engineering Group, head of Safety & Quality Management Division, head of the labor union, and representatives of partnering businesses and professors. The meeting, which is held once every half year, will share the status of industrial accidents and measures to prevent recurrence, etc., and the meeting minutes will be disclosed transparently on the website.

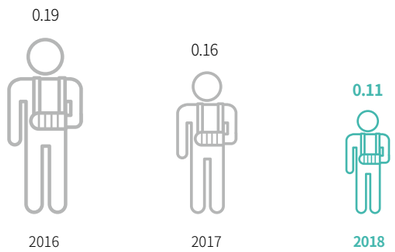
Launching 1st Safety Management Committee in 2019

Lowest accident rate
for contracted constructions among public institutions

Securing Fairness of Safety

Korea East-West Power has discovered that 97% of the accidents occurred with the workers of partnering businesses over the last five years of disaster analysis. Accordingly, we have strived to improve the working environment and equally guarantee the health rights of all workers by increasing onsite personnel. In January 2018 and January 2019, a total of sixty-two people in charge of consigned operation facilities were added to establish a two-person working system and to prevent serious accidents resulting from working alone. No deaths occurred in 2018, and the accident rate for contracted construction decreased by 31% year on year. In 2019, we plan to conduct research to identify the appropriate number of people for safety and to hire additional onsite personnel.

Accident Rate for Contracted Construction Unit: %



A total of 41
dangerous sites improved

New Installation of the Danger Reporting System

Korea East-West Power has newly established the 'Safety Call' system, which is an officially anonymous safety communication channel, allowing all onsite workers to comment on safety issues and to request to cease operation upon the detection of a danger. This danger reporting system applies equally to all workers of partnering businesses entering and exiting Korea East-West Power's locations, and the right to demand safety measures is also specified in the contract provisions. After the introduction of the system, dangerous sites have been improved by replacing the crane lifting facilities at Dangjin Power Plant from ladders to staircases with handrails, while the handling status of the reported matters are shared across all business locations.

Safety Management Activity


CPR Training for Employees


AR Smart Glasses

Smart Safety Management with ICT Technology

Korea East-West Power seeks to effectively prevent significant disasters by using fourth industry technology. We are developing technologies for use by 2021 through which we can monitor the status of workers in real time for working in confined spaces by using position tracking sensors and transmitting evacuation alerts to workers and supervisors in the event an abnormality is detected with regards to scaffolding structures with scaffolding load sensors. We are also concentrating our capabilities on developing real-time unsafe behavior monitoring and alarm systems to ensure that the workers do not approach when the coal conveyor belts operate by using infrared sensors and CCTV cameras. We are also developing a failure diagnostic system using fiber optics to conduct remote inspection in real time in lieu of visual checks moving forward.

Implementation of Safety Training Using Virtual Reality

Korea East-West Power develops augmented reality (AR)- and virtual reality (VR)-based educational contents and conducts safety training, considering that it is difficult for the workers to learn practical field response skills through documentation-based safety and health education. Through the VR training system, operators and technicians of partnering businesses will experience simulated emergency situations, and in the event of failure or disaster, will be able to promptly recognize the given situation and perform countermeasures such as starting emergency generators. The AR Smart Glasses are the world's first real-time, onsite image sharing system applied to power plants, and have been selected as an excellent technology by the Electric Utility Cost Group (EUCG) among highly advanced technologies enabling workers to vividly master the operating sequence for the generation facilities and the site of the control room.

Resident partnering businesses rewarded approximately
KRW 55 million
for achieving zero accident ('14-'18 accumulative amount)

Support for SME Disaster Response

Korea East-West Power provided assistance for four partnering businesses to build disaster reduction activities (BCM)* to help enhance disaster safety management capabilities as well as the disaster response capabilities. In addition, when employees of Korea East-West Power and the resident partnering businesses jointly achieved a zero accident rate, they were rewarded, and consequently, a total of four business locations have jointly achieved a zero accident rate with partnering businesses.
By combining the rewards offered for achieving an excellent rating for disaster management evaluation and the donations voluntarily made by the employees, we have installed fire extinguishers and fire detectors in 220 households vulnerable to fire in the Ulsan region, thereby enhancing the level of safety for the partnering businesses and local communities as a public enterprise.

***BCM(Business Continuity Management):** A plan for analyzing an entity's potential risks to maintain business continuity

Reward for Jointly Achieving Zero Accident Rate with Partnering Businesses Unit: KRW 1,000

Eco-Friendly Power Generation

Sustainability Context

As coal-fired power has been noted as a main cause of fine dust, the government plans to reduce coal-fired power generation to address public concerns. In the current power supply and demand situation, since the proportion of coal-fired power plants is realistically high, environmental issues such as fine dust reduction through facility improvement are attracting attention.

EWP Approach

Korea East-West Power is changing the management direction of environmental issues from ex post treatment of environmental risks to ex ante prevention, and from managing individual pollutants on a by–medium basis to an individual receptor basis such as humans and nature. We are carrying out eco-friendly research and developments such as carbon capture and storage (CCS), which is being promoted in the US and Europe.

Link to UN SDGs

13.2 Integrate climate change countermeasures into national policies, strategies and plans.

EWP Korea East-West Power has established the 'Renewable Energy 3025' plan which is higher than the government's target for new renewable energy. We plan to increase the proportion of renewable energy generation up to 25% by 2030, thereby replacing conventional coal-fired power generation with the LNG power generation and diversifying renewable energy sources.

EWP Performance

36 % of fine dust
reduced in 2018

KRW 5.5 billion
of revenue generated with surplus emission rights for greenhouse gas

Environmental Management Implementation System

Korea East-West Power has reset its vision from power company to eco-friendly energy company, and has actively been implementing 'people-first' environmental policies. Through the 'Renewable Energy 3025' plan, we have set the proportion of renewable energy generation volume higher than the government's target for 2030 and are expanding energy production using photovoltaic and wind power. Our environmental risk management system helps to prevent dangerous situations in advance.

Mid- to Long-Term Environmental Policy

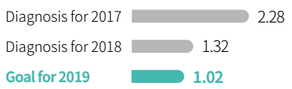
Korea East-West Power has set three strategic directions in order to shift the direction of environmental management from the proper treatment of pollutants to nature- and human-centric management, and has set nine strategic tasks and forty detailed tasks accordingly.

Human Centric Environmental Management Implementation System

Vision	An energy company beloved by the people for its people-centric environmental management		
Strategic Direction	**Clean energy production** (Minimization of pollutant emissions)	**Companion with the local community** (Communication and coexistence)	**Development of a sustainable system** (Strengthening of internal system)
Strategic Task	・Create a pleasant atmosphere ・Strategic implementation in response to climate change ・Improve water quality and expand resource circulation	・Implement a participatory environmental monitoring ・Communicate with stakeholders ・Pursue implementing social values	・Build a comprehensive preventive management system ・Implement environmental technology development with leadership ・Strengthen people-centric environmental management circulation
Expected Performance	・82% reduction in air pollutants ・70% reduction in fine dust ・20% reduction in greenhouse gas ・250,000 tons in organic solid raw materials used	・Acquired rating A for carbon information disclosure ・Sustainability reports published for 18 years consecutively ・300 SMEs supported for greenhouse gas reduction ・Jobs created for 23,593 people used	・Environmental risk management system developed ・100% recycling rate achieved for cinders ・Greenhouse gas collection and utilization technology developed and capacity of 1,000kW achieved ・Expanded company-wide hazardous chemical-free business locations

ERMS Environmental Risk Diagnostic Criteria

Environmental Risk Diagnosis Results Unit: %



Goal of Renewable Energy Generation

Korea East-West Power has achieved the best performance for completed and in-progress renewable energy facilities among power companies by focusing on large-scale renewable energy business based on stability and environmental impact. As of December 2018, Korea East-West Power operates 514.7MW of renewable energy facilities, and has set the goal to increase the capacity of renewable energy to 7.21GW by investing approximately KRW 23trillion by 2030.

Environmental Risk Management

Korea East-West Power is endeavoring to achieve zero environmental risk and zero violation of environmental laws which may occur by establishing a preventive environmental risk management system (ERMS) for the first time as a power company. The level of environmental risk is divided into the five levels of normal-interested-cautionary-alerted-severe, and the risk-specific status of each business location and the history of violations in accordance with environmental laws and revisions are managed. In 2018, we lowered the level of risk by 0.96 points year on year by installing the largest foam barrier on the west coast and the automatic oil pollution control system in Ulsan.

Minimization of Environmental Impact

Social value creation performance
KRW 51.2billion

Korea East-West Power has invested a total of KRW 81.5billion in improving environmental facilities such as desulfurization, denitrification, and electrostatic precipitators to help reduce air pollutants over the past three years, and reduced the air pollutant emissions in 2018 by 36% relative to that in 2015. We have actively implemented the greenhouse gas emissions trading system to generate additional profits and are continuously investing in developing eco-friendly energy technologies.

Reduction of Air Pollutants

Korea East-West Power has established the goal of reducing air pollutant emissions by 70% by 2030. To this end, we have installed high-efficiency air pollutant reduction facilities such as desulfurization, denitrification, and dust collection facilities, and have conducted air environment control based on our own standards which are stronger than the legally required air pollutant emission standards.

EWP's Air Pollution Control Roadmap

70% Reduction of Company Wide Air Pollutants Compared to 2015 by 2030

Phase 1 (2016 ~ 2017)	Phase 2 (2018)	Phase 3 (2019~)
· Develop fine dust reduction plan (2016) · Reinforce phase 1 facilities of coal-fired power plant	· Complete reinforcement of environmental facilities of coal-fired power plant's · Establish heavy oil and combined cycle reduction plan	· Completely replace coal-fired power generation facilities with high-efficiency environmental facilities · Reinforce heavy oil and combined cycle environmental facilities

Comparison of Sulfur Content of the Supplied Coal at Korea East-West Power Unit: %

Trends in Environmental Facility Investment

Expected Impact of Full Replacement of Environmental Facilities at Dangjin Thermal Power Plant

Classification	Before Improvement (2017)	After Improvement (2021)
SOx	21ppm	9ppm
NOx	36ppm	6ppm
Dust	4mg/Sm^3	1mg/Sm^3

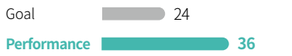
Conversion to Eco-Friendly Fuel

Coal-fired power plants have been noted for generating fine dust in the process of power generation, which accounts for 62% of Korea East-West Power's capacity. Korea East-West Power has strengthened the fuel purchasing criteria for coal to help reduce air pollutants from the phase of generation. We changed the allowance standard for coal purchases of less than 1.0% of sulfur and regulated only low-sulfur coal containing less than 0.7% of sulfur in 2018, and after the regulation, Dangjin Thermal Power Plant turned out to have the lowest sulfur oxides emissions concentration among the large-capacity power plants of the five largest power companies. Low-sulfur coal has the risk of spontaneous ignition due to its high volatility, but Korea East-West Power is using drones and thermal imaging cameras to operate a system to constantly monitor the coal yard. Heavy oil-fired power emits 1.4 times more dust than coal-fired power, and its utilization rate increased following the shutdown of the nuclear power plants. Korea East-West Power uses low-sulfur oil as its raw material to help improve air quality despite the 15% increase in the purchase price. In accordance with the low-sulfur oil conversion promotion plan, 110,000 tons of low-sulfur oil has been purchased, and the sulfur content in the fuel has significantly declined from 2.5% to 0.3%, resulting in an 88% reduction in sulfur oxide emissions.

Continuing Investment in Environmental Pollution Preventive Facilities

Korea East-West Power reduced the air pollutant emissions in 2018 by 36% relative to 2015 through its continuous investment in environmental facilities. In 2018, we invested KRW 43.6billion to add one set of denitrification equipment catalysts for all Dangjin Thermal Power Plant Units 1 through 10, and also newly installed denitrification facilities (SNCR) for Donghae Thermal Power Plant to help reduce nitrogen oxides.

Current Status of the Fine Dust Reduction Rate for 2018 Unit: %



Current Status of the New Renewable Energy Production for 2018 Unit: MW

Reduction of Fine Dust

Korea East-West Power selected the supply of eco-friendly energy centered on people without fine dust among the three largest core tasks to implement for achieving goals of innovation, and set the goal of achieving 1,744MW of new renewable energy while reducing fine dust by up to 50% by 2022. In 2018, we reduced the fine dust by 36% and produced 90MW of new renewable energy.

Indoor Coal Yards for Fine Dust Reduction

Korea East-West Power is endeavoring to reduce the impact and fine dust on the local residents around power plants by keeping coal yards indoors. In 2018, Dangjin Thermal Power Plant kept Units 9 and 10 indoors, and Donghae Thermal Power Plant kept its coal yards indoors. Moving forward, we plan to invest KRW 470billion to sequentially keep all coal yards indoors for Dangjin Coal-Fired Power Headquarters. Furthermore, to meet the government's comprehensive measures for fine dust control, we invested KRW 1.82billion in six business locations of Dangjin Thermal Power Plants and three business locations of Donghae Thermal Power Plant to additionally install fine dust measuring stations to monitor fine dust generation.

Water Quality and Marine Environmental Control

Korea East-West Power has participated in the joint investment and technological development of private companies, and government and public enterprises to help remove all nitrogen from desulfurized wastewater. From 2015 to 2017, we jointly developed an advanced treatment system to treat non-degradable substances such as nitrogen and phosphorus, and the total quantity of water pollutant emissions and the proportion of nitrogen are declining every year. In addition, Korea East-West Power satisfies the requirements of the government and local governments by conducting an antifoaming agent effect survey in the waters near the power plant. We have proven through the project conducted with Korea Institute of Ocean Science & Technology and Hanyang University that the antifoaming agent used to prevent the foaming of warm water does not affect the ocean.

Hazardous Chemicals Management

Korea East-West Power is systematically identifying the use of hazardous chemicals and replacing hazardous chemicals with general substances. As for Donghae Thermal Power Plant, we have succeeded in achieving a hazardous chemical-free workplace by replacing all used substances with low-concentration chemicals. Moving forward, Korea East-West Power will continue to do its best to prevent chemical accidents by reinforcing the facilities and replacing hazardous chemicals with general substances.

Current Status of the Use of Hazardous Chemicals and Alternative Substances as end of 2018

Classification	Anhydrous ammonia	Sodium hydroxide	Hydrochloric acid	Ammonia solution
Place of Use	Denitrification facilities	Water and wastewater treatment	Water and wastewater treatment	Denitrification facilities
Usage (tons/year)	9,584	3,989	2,195	193
Substitute	-	Concentration: less than 5%	Concentration: less than 10%	Concentration: less than 10%

Successful Performance of the Emissions Trading System to Respond to Climate Changes

Korea East-West Power is aware of the gravity of climate change, which is a global environmental issue. Accordingly, we are making various efforts to help reduce greenhouse gases, which are a cause of climate change, and the successful implementation of Korea East-West Power's emissions trading system is a quantitative achievement for responding to climate change. Korea East-West Power implemented the emissions trading system at the highest level for the power generation sector during the first planned period (2015~2017), and in 2018, secured surplus emission rights for approximately 100,000 tons.

Current Status of the Performance of the Emissions Trading System*

Unit: 10,000 tons

Classification	2015	2016	2017	2018
Government Allocation	3,977	4,063	4,058	3,962
Emission Performance	3,795	3,974	3,858	3,952
Surplus Emission Rights	**182**	**89**	**200**	**10**

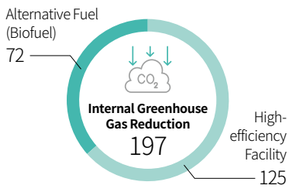
***Emissions trading system:** The government allocates to companies the right to emit greenhouse gases (emissions right), and the companies can emit the greenhouse gases to the allocated extent, or purchase the emissions right in the market. If there is a large quantity of emissions compared to the allocation, and if the emissions rights are not purchased in the market, a penalty within three times of market-price must be paid to the government

Internal Greenhouse Gas Reduction Activities

Among the representative greenhouse gas reduction activities of Korea East-West Power, we have introduced and operated high-efficiency power generation facilities such as Ulsan Unit 4 combined and Dangjin Units 9 and 10 to reduce the greenhouse gas emissions unit (ton/MWh) by approximately 8%. In addition, low carbon biofuel hybrid generations such as Bio-SRF, organic solid fuels, and wooden pallets are used to recycle waste resources and reduce greenhouse gas emissions.

2018 Internal Greenhouse Gas Reduction Performance

Unit: 10,000 tons



MOU for SME GHG Reduction

MOU for Ghana CDM Project

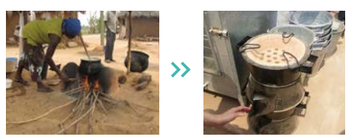
Greenhouse Gas Reduction Project

Korea East-West Power is responding to climate change by conducting greenhouse gas reduction activities outside of the organizational boundaries where there is no obligation to reduce them.

Domestic Project In cooperation with twelve local SMEs, we have supported SME energy efficiency improvement projects and have also reduced greenhouse gas emissions through energy savings. In addition, we have collaborated with the Korea Energy Agency every year to provide greenhouse gas reduction consulting services and to share Korea East-West Power's know-how with SMEs across various fields to diagnose issues within companies and to identify improvements to help reduce greenhouse gas emissions.

Overseas Projects While improving living conditions in underdeveloped countries by implementing overseas Clean Development Mechanism (CDM) projects which supply cooking stoves in Africa, we have been working to reduce global greenhouse gas emissions. Furthermore, we are planning various projects to contribute to global greenhouse gas reduction by providing advanced technologies to developing countries such as Uganda and Myanmar.

CDM Project for provision of high-efficiency cooking utensils(Cook Stove) in Ghana, Africa



Traditional cooking style | Using Cook Stove

Contributing to the Resource Recycling Society via Recycling of Cinders

Korea East-West Power has been contributing to transforming our society into a resource recycling society by recycling the byproducts generated from the power generation process. In 2018, we recycled 1.61million tons out of 2.12 tons of cinders generated, achieving a high recycling rate of 76%, and 430,000 tons of plasters are 100% recycled. Major recycling locations are using them for construction and building materials such as cinders for concrete admixture and plaster for plaster board, and additionally, we are conducting various research projects to develop new resource recycling technologies.

Status of Recycling Desulfurized Plaster and Cinders

Classification	Generation Volume (10,000 tons)	Recycling Capacity (10,000 tons)	Recycling Rate (%)	Profits (KRW 100million)
Cinders	211.7	161.5	76.3	82.2
Desulfurized Plaster	43.0	43.4	100	56.8

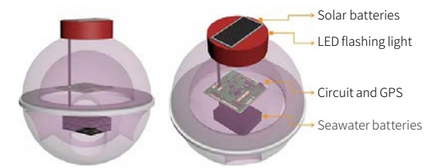
Development of Eco-Friendly Energy Technologies

Development of Technologies for the Seawater Battery Energy Storage Device

The seawater battery energy storage device is a new-concept battery system which utilizes infinite seawater by replacing lithium ion, which is a finite resource. Korea East-West Power, in cooperation with Ulsan National Institute of Science and Technology (UNIST) and local SMEs, has completed the development of the world's first electric charge and discharge system utilizing Na+ under the seawater. This technology is meaningful in that it has overcome the need to supply lithium, a finite resource for the conventional energy storage systems, and it has addressed the risk of failure when seawater infiltrates the existing batteries. Korea East-West Power has introduced new technologies in the GPS buoy* for fishing nets and has also supplied them to local fishermen in the Ulsan region, thereby contributing to the local economy and conducting tests for commercialization.

***Bouy:** A buoy which floats on the water to convey maritime information, such as signs of a strait and the danger of a reef. The buoy for fishing nets displays the locations of fishing nets and farms installed in the ocean to help prevent collision of fishing vessels and to serve as a safety facility which facilitates prompt collection of fishing nets

Buoy for Fishing Net Using Seawater Battery



Development of CO2 Separation Membrane Collection Technology

The CO2 separation membrane collection system is one which can selectively separate and store only the carbon dioxide in the exhaust gases emitted from thermal power plants. Korea East-West Power has succeeded in commercializing the world's first CO2 separation membrane collection facility. This is likely to be commercialized since it is approximately 36% cheaper than the cost of the conventional technologies owned by US companies. Korea East-West Power will continue to contribute to reducing environmental risks by developing eco-friendly energy technologies as a multi greenhouse gas emission company.

Strengthening the 'Sympathy' and Emotional Exchange

A Workplace Where Our People are Happy

A Workplace Where Our People are Happy

Sustainability Context

Transparency and fairness in the hiring process are social issues that have recently emerged which may have a direct impact on an entity's image. Meanwhile, respect for human rights in the workplace and the creation of an environment where work and life can be balanced are essential for enhancing the employees' satisfaction and ensuring work efficiency. By creating a happy workplace, employees can secure corporate sustainability and increase productivity.

EWP Approach

Korea East-West Power prevents discrimination and inequality which may arise in the hiring and personnel management process by practicing blind recruitment and by operating a reasonable compensation system. In addition, we support the competency development for employees through various human resource development programs, while improving their happiness and rooting out discrimination based on family and parenting obligations by implementing working systems and welfare policies that allow for balance between work and family life.

Link to UN SDGs

5.4 Recognize and value free of charge care and domestic work by providing public sector services, social infrastructures and social protection policies and by promoting the sharing of responsibilities within households and families appropriately for each country.

10.3 Ensure equal opportunities and reduce inequalities of outcomes through efforts to eliminate discriminatory laws, policies and practices and promote appropriate laws, policies and activities, etc.

EWP Korea East-West Power encourages employees to share their responsibilities within the family by guaranteeing parental leave and reinstatement to original duty for both women and men. We are also expanding the provision of equal opportunities through fair hiring procedures and conversion to full-time positions.

Zero hiring fraud
as a result of auditing hiring fraud for public enterprises by the Ministry of Commerce, Industry and Energy in 2018

The first power company to
win the Grand Prize for the Republic of Korea Human Resources Development for
2 consecutive years

Equal Opportunities without Discrimination

Fairness and transparency in the hiring process can have a significant impact on the hiring process as well as on the overall image of the organization. Korea East-West Power practices blind hiring to ensure equal opportunities for everyone and motivates individual development through a reasonable compensation system.

ZERO hiring fraud

A Fair Personnel System

Selection of Talents Based on Capabilities via Blind Hiring Practices

Korea East-West Power secures talents based on their capabilities and prevents unreasonable discriminations through National Competency Standards (NCS)-based assessment and blind hiring practices. When an application is filed, we exclude personal information, evaluate job descriptions mainly, and provide uniforms of Korea East-West Power for the interview to prevent various unreasonable discriminations and prejudices. In 2018, we removed the possibility of discrimination and extended the interviewing time per person by removing the check box for those subject to the women hiring target system from the job application form.

Development of Risk Management Preventive System for Each Phase of the Hiring Process

Korea East-West Power has established a risk management preventive system for each phase of the hiring process in order to manage risks in the process. As a result of identifying potential risks and proactively responding to them, no hiring fraud has been detected as a result of the audit conducted by the Ministry of Commerce, Industry and Energy in 2018 for public enterprises.

Hiring Risk Management System

Hiring Plan Development	Mandatory inclusion of one or more external members of the standing personnel committee related to hiring
Selection of Hiring Agency	Specification of provisions on claims for damages and permanent preclusion in the event of fraudulent acts committed by an entity
Notice of Hiring	· Mandatory notice of fifteen days or longer for all hiring notices · Mandatory 100% disclosure of the number of employees hired, procedures and evaluation criteria
Document Verification	Mandatory inclusion of over majority of external members when forming ad hoc committee exclusive for the specified purpose
Written Examination	Mandatory audit of routines for all processes in the presence of auditors and results of written examination
Interview	· Operation of interviewer separation system and mandatory participation by a majority of outside interviewers · Disclosure of individual interviewing scores, pass mark, ranking, etc.
Admission	Implementation of advance inquiry on those laid off using the National Police Agency's identity inquiry and the Anti-Corruption & Civil Rights Commission's Zero Me System

Fair Performance Management for Motivation

Introduction of a Reasonable Compensation System Reflective of Institutional Characteristics

Korea East-West Power has established and is implementing a mid- to long-term roadmap to build a fair compensation system centered on duties, skills, and performance. In 2018, we expanded the fair compensation system to convert the basic salary, which was automatically raised based on the number of years served, into an upper limit system for each position, and divided the duty classification system into a more fair and systematic compensation system. In addition, in order to enhance the effectiveness and adequacy of compensation, we introduced a mandatory job qualification system, which required job competency evaluation and a certain training course for each position and duty.

Education for the Future of Company and Employees

'Grand Prize for Republic of Korea Human Resources Development' for 2 consecutive years

Executive Manager Safety Leadership Training

Strengthening of the Employees' Competency

Korea East-West Power provides a customized training program based on the position and needs of each employee based on the concept of talent of 'Creative Fusion and Combined Talent to Lead the Eco-Friendly Energy Market'. In 2018, the three largest strategies of 'cultivating future response innovation, strengthening human resources capabilities, and strengthening organizational communication and harmonization' were changed to the four largest strategies of 'increasing core competencies, building basic capabilities, adding selective capabilities, and expanding the capability system', thereby providing more systematic and detailed capability strengthening opportunities. Through such various educational programs, we have achieved the feat of being to only power company to win the 'Grand Prize for Republic of Korea Human Resources Development' for 2 consecutive years.

Human Resources Development Program

Improving Core Competencies
- New renewable and new technology education
- Long-term consigned education domestic and overseas (Silicon Valley, etc.)
- Strengthening of executive leadership

Building Basic Capabilities
- Introduction of mandatory job training
- Internalization of vision and core values
- Leadership training for women

Adding Selective Capabilities
- Certification acquisition support system
- Training for designing a new life designing
- In-house venture and social contribution education

Expanding Capability System
- Capability system remodeling
- Implementation of EWP educational cycle for each rank

2018 Annual Training Performance Results

Unit: People, KRW 1,000

Classification		2016	2017	2018
Training Personnel by Rank (overlapped)	Class 1 or higher	502	513	700
	Class 2	1,773	2,129	2,235
	Class 3	8,348	8,961	10,261
	Class 4	26,326	33,748	34,578
	Class 5	1,637	2,873	3,867
	Subtotal	38,586	48,224	51,647
Total budget (average per capita)		2,697	3,472	3,600

Securing of Women's Leadership

Korea East-West Power has operated the 'Women Manager Target System' to enhance the representation of women and to strengthen the foundation for the promotion of female employees. We have also secured a pool of female leader candidates, provided equal opportunities to perform duties, and created a maternity protection and family-friendly culture to ensure that women are not discriminated against in promotions and transfers of duty.

A Workplace Where Employees are Happy

In 2018, Korea East-West Power announced a new corporate culture promotion system called 'RESPECT7', and is also promoting a corporate culture of mutual respect and cooperation. We provide a channel for free communication between labor and management, and support everyone to help them lead a healthy life. We guarantee basic human rights and working conditions, and support the balance between work and life of the employees through a family-friendly system.

RESPECT7 Components

Renovation
- Improvement of the customary working culture

Ethics
- Strengthening of the ethics and integrity system

Social Value
- Social contribution
- Job creation

Pride
- Etiquette and culture within the workplace

Equality
- Performance competency based personnel management
- Process performance management

Care
- Work Smart
- Coexistence of work and family

Trust
- Coexistence of labor and management
- Communication and harmonization

Organizational Culture of Trust and Communication

Settlement of a Horizontal Corporate Culture via Innovations

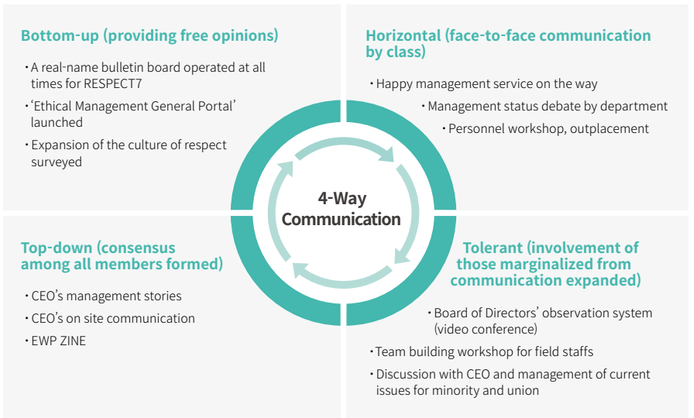
The culture of 'RESPECT7' includes twenty tasks of innovation aimed at creating an innovative and horizontal organization and creating a corporate culture in which people want to work toward improving business, relationships, growth, and the work-life balance. Korea East-West Power will select a 'Culture Leader' and continue to listen to and improve based on the opinions of employees to improve the corporate culture.

Development of Desirable Labor Management Relations

Korea East-West Power has in place a system for resolving labor and management issues by operating the 'Future Committee', which is a decision-making organization consisting of equal numbers of labor and management members. Discussions were divided into divisions for agenda by and between labor and management such as manpower management, part-timers, work shifts, wage system, and the 52-hour work week. In addition, labor management workshops, labor and management partnership programs, and labor management 'one-mind' track and field day, etc., promote communication between the labor and management, while separate meetings are held for minority unions.

Facilitation of Communication via Multi-Channel Communication

Korea East-West Power is facilitating communication within the organization and resolving labor and management issues through multi-channel communication called the '4-Way Communication Channel'. We will further propagate the culture of communication to ensure that everyone can actively participate in corporate issues and promote mutual understanding.



Improvement of Working Environment

EAP Program

Mental and Physical Health Care for Employees

In addition to the industrial safety, the health of employees is an important part of personal happiness and work efficiency. Korea East-West Power provides a variety of programs to help support the mental and physical health of its employees. The Employee Assistance Program (EAP) consists of programs for mental health, including stress counseling and special lectures on remedies, as well as programs for physical health such as smoking cessation and physical strength development. In 2018, a total of 389 people participated in the mental health program, and a specialized family doctor paid nine visits to the business locations and cared for the health of 79 people.

Status of EAP Operation

Classification	Details	2018 Performance
Mental health	Counseling for stress	7 times
	Special lecture on stress relief	2 times
	Gardening practice	1 time
Physical health	Smoking cessation program	5 times
	Musculoskeletal disease preventive activities	244 times
	Specialized family doctor's visit and consultation at business locations	9 times

Human Rights Management

Development of the Human Rights Management Implementation Organization

Korea East-West Power enacted the Human Rights Management Charter to help protect the human rights of its stakeholders, including its employees and to achieve human rights management. In 2018, we revised the Human Rights Management Charter in consideration of human rights-related issues which arose after the enactment of the Charter, and also created the separate Ethics & Compliance Department of Social Values Promotion Division which is in charge of human rights management. Furthermore, we revised the Korea East-West Power's Guidelines on Human Rights Management to reflect the manuals of the Anti-Corruption & Civil Rights Commission and applied them to our stakeholders.

Human Rights Management's Value System

Major stakeholders	Job applicants	Employees	Workers of partnering businesses	Local residents of project area	General public
Human rights issues	· Equality in hiring	· Working conditions, gender equality · Harassment in the workplace	· Conversion of part-timers to full-timers · Industrial safety	· Minimization of damages to project development	· Countermeasure for fine dust
Human rights protected	Equal rights	Right to health	Right to life	· Freedom of residence and relocation · Property rights	Environmental rights

Human Rights Management's Implementation Organization

Organization for the Human Rights Management
Ethics & Compliance Department of Social Values Promotion Division

→ Decision Making Organization
Human Rights Management Committee
(Academia, civic groups, partnering businesses, labor union, female employees, etc.)

→ Organization Remedying Human Rights Infringements
Working Committee for Remedying Human Rights Infringements
(heads of related departments, experts, labor union)

Coexistence of Work and Life

Reduction of Working Hours by Improving Working Practices and Work Methods

The social atmosphere stressing on the implementation of the 52-hour work week and work and life balance has underscored the need to improve the culture of working long hours and work efficiency. Korea East-West Power is improving the working culture and realizing the balance of work and life by including elements required for efficient performance in 'RESPECT7', which is an initiative for innovating the corporate culture.

Working Culture Improvement Activities

RESPECT7 components for work and life balance

Renovation (Improving the customary working culture)

① Improve on unnecessary face-to-face reporting

② Merge or consolidate repetitive hand written documentation

Care (Working smart)

③ Provide clear working guidelines

④ Introduce 330 Core Time System for intensive work

⑤ Introduce PC-off system

⑥ Run campaign to build a culture for vacations and leaving work on time

⑦ Pay for expenses in person such as business traveling expenses

Personnel using flexible working system increased by 127%

Status on the Use of Welfare System Related to Pregnancy and Parenting

Unit: people

Classification	2017	2018
Reduced working hours during pregnancy	16	19
Prenatal and postpartum leave	19	29
Parental leave for women	54	64
Spouse delivery leave	66	62
Parental leave for men	8	11
In-house day care	106	110

Family-friendly Certification

Enhancement of Quality of Life through Flexible Working Hours and Guarantee use of Vacations

Korea East-West Power encourages its employees to utilize the flexible working system suited to their circumstances and needs, thereby enhancing work efficiency and ensuring a life in which relaxation is possible. We have surveyed the preferences of employees for the flexible working system and have also introduced the group flexible working system to help diversify the types of work and to enable them to use the system freely. We are the first public enterprise to have installed a vacation reporting system, which automatically approves of vacations for which petitions are made at least two weeks in advance.

Status of the Use of Flexible Working System

Unit: people

Classification		2017	2018	Rate of Increase
Hour selection system		29	51	76%
Flexible working system	Time difference commuting type	525	1,753	143%
	Working hour selection type	297	293	
	Intensive work type	27	17	
Remove working system	Telecommuting type	60	97	10%
	Smart work type	41	14	
Total		979	2,225	127%

Realization of Parenting Coexisting with Work

Korea East-West Power is implementing a system to create a family-friendly corporate culture and also to support the parenting of our employees. For pregnant women, a petition can be made for one stop parental leave via the automatic parental leave system, and reinstatement to original position is ensured in the event of petition. For male employees, spouse delivery leave and the working father support program are available. In 2018, we received family-friendly certification.

EWP Sustainability Management

Governance

The Board of Directors, which is the highest decision-making body of Korea East-West Power, reflects the opinions of key stakeholders and also plays an essential role in practicing core values together with the leadership. The regular board meetings seek continuous development to respect the people and employees and lead social responsibility and innovation.

Composition and Roles of the Board of Directors

The Board of Directors of Korea East-West Power consists of four internal directors, including the president, and five external directors, and a non-executive (external) director chairs the board in accordance with the provisions of Article 37-2 to secure the independence of the board. The board has specialized sub-committees, an audit committee, and corprorate officer nomination committee operating and makes decisions on the business management and service innovations, etc., based on social values, which are the main agenda.

Composition of the Board

as of July 2019

Name	Gender	Affiliation & Position		Major Experiences	Term (YYYY.MM.DD)
Park Il-Jun	Male	Standing Director	Chief Executive Officer	・Former Director General, Planning and Coordination Division, Ministry of Trade, Industry and Energy ・Former Director General, Industrial Policy Division, Ministry of Trade, Industry and Energy	2018.2.13~ 2021.2.12
Sung Shik-Gyeong	Male		Standing Auditor	・Former Standing Auditor, Korea Asset In Trust ・Former Policy Research Fellow (Class 2), National Assembly	2018.6.25~ 2020.6.24
Kwon Oh-Cheol	Male		Head of Engineering Group	・Former Head of Shin Dangjin Construction Headquarters, Korea East-West Power ・Former Director of Office of Construction Technology, Technology and Safety Headquarters, Korea East-West Power	2018.5.31~ 2020.5.30
Pyo Yeong-Jun	Male		Head of Business Development Group	・Former Head of Planning Division, Korea East-West Power ・Former Head of Global Business DIvision, Korea East-West Power	2018.5.31~ 2020.5.30
Mun Ho	Male	Non-Executive Director		・Former Standing Vice Chairman, Korea Smart Grid Association ・Former Vice President, Korea Electric Power Corporation	2017.1.11~ 2019.1.10
Park Kyeong-Ho	Male			・Member, Gangdong-gu Resident Ombudsman ・Director, Institute for Climate Change Action	2018.3.22~ 2020.3.21
Lee Gyeong-Weon	Male			・Advisor, Ulsan Jung-gu Council, National Unification Advisory Council ・Former Major, Air Force Transportation Command	2018.3.22~ 2020.3.21
Yang Seung-Joo	Female			・Research Fellow, Hanyang University Global Multicultural Research Center ・Former Director, Green Institute, Green Korea	2018.11.14~ 2020.11.13
Kim Hong-Cheol	Male			・Managing Partner, Law Firm Hosan ・Former Deputy Director, Examination 2, National Tax Service	2018.11.14~ 2020.11.13

Appointment Procedure for Directors

Korea East-West Power appoints its directors in accordance with the 'Articles of Incorporation of Korea East-West Power Co., Ltd'. Its president is appointed by the Minister of Commerce, Industry and Energy with the President's final approval, and the term of office is 3 years. The standing directors, except the president, are appointed by the President following the resolution of the general shareholders' meeting. The term of office of directors is two years, and each corporate officer's term may be renewed for one year.

Appointment Procedure for Directors

Details of the Board of Directors Activities

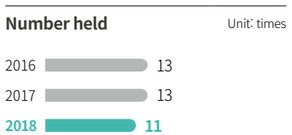
Korea East-West Power's Board of Directors makes decisions with the majority vote of the registered directors such as the company's major decision-making matters, including management goals, budgets, operational plans, and mid- and long-term financial management plans. Directors with a special interest in the board resolutions cannot exercise their voting rights and will not be included in the number of the registered directors. Board meetings may be held only if over one third of the registered directors are present. In 2018, a total of 11 board meetings were held, with a 98% attendance rate.

Attendance Rate

Unit: %

Number held

Unit: times



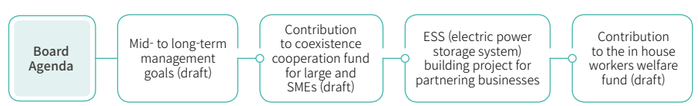
52 agenda for social values derived

Details of the Board of Directors Activities for 2018

Board of Directors' Operating System for Social Values

Korea East-West Power is strengthening the expertise and roles of non-executive directors in order to proactively respond to the changes in the environment at home and abroad. Further to evaluating non-executive directors based on a sense of morality and ethics, we are also facilitating preliminary explanations to enhance the understanding of the board agenda and support programs to improve occupational competencies of the new non-executive directors. In addition, we are strengthening the advisory roles of non-executive directors to realize social values and to enhance the procedural legitimacy and driving force by proactively proposing agenda to help expand the review of business management issues.

Major Agenda for Social Values



Ethical Management

Korea East-West Power is pursuing transparent and ethical management activities to grow into an energy company which creates social values centered on the people's confidence. In 2018, we have devised a new vision of 'New Ethical Management', thereby endeavoring to root out corruptions and propagate ethical culture.

Strengthening of the Implementation System of Ethical Management

New Installation of the Organization Responsible for Ethical Management

As a public enterprise, Korea East-West Power has set a vision of ethical management to act 'Together, You and I' to establish an ethical corporate culture in line with government policies, and has newly established key tasks for each direction of implementation. The New Ethical Management system, in particular, emphasizes spontaneity and action based on the opinions of employees on the ethical policies collected via integrity workshops and discussion forums.
In 2018, we established the Human Rights Management Committee and the Reporting and Assistance Center for Damages Arising out of Abuse of Power, focusing on rooting out abuse of power, strengthening human rights management, and realizing human-centric public values. Furthermore, we have strengthened the honorary auditor, our external advisor, and the integrity audit group, to operate a civic auditor system customized to the needs of the headquarters and business locations.

New Implementation System of Ethical Management

Ethical Vision	A Public Enterprise Growing and Respected for Ethical Management in Action (Slogan: 'Together, You and I')		
Direction of Implementation	Build ethical infrastructures of Korea East-West Power	Strengthen participatory ethics to practice	Expand social values and culture
Key Task	① Update Ethical Management System ② Enact SNS Code of Ethics ③ Install EWP petition bulletin board	① Outreaching integrity and ethics education ② Reasonable work instructions ③ Fair personnel/disciplinary system	① Establish a culture of mutual respect ② Cultural system connecting social values ③ Integrity win-win project
Core Value	Transparency and fairness	Spontaneity and proactiveness	Confidence and respect

Strengthening of the Code of Ethics

Korea East-West Power established the code of ethics in 2018. In particular, we have revised hiring regulations to enhance the prevention of ethical risks.

Details of the Code of Ethics Revision

Code of Ethics	Details of Revision
Audit Regulations (Internal Control)	Enhance the fairness of procedure by extending the deadline for review (15 → 30 days)
Personnel Regulations (Code of Practice)	Cancel the hiring of fraudulent successful candidates and newly install measures to remedy victims of hiring fraud
Code of Conduct (Criteria of Judgment)	Report on proposal of hiring family and private interest

Activities of Practicing Ethical Management

Developing Anonymous Reporter Compensation System for a Transparent Corporate Culture

Korea East-West Power has developed an anonymous reporter compensation system for the first time as a public enterprise to create an organizational culture of integrity by facilitating internal reporting. We have revised operating standards for the participatory ethical activities and have promoted various reporting channels to help prevent internal ethical risks in advance. Consequently, in 2018, no offensive conduct occurred, allowing us to achieve excellent results in the integrity survey.

Before and After the Anonymous Reporter Compensation System

Before improvement

Reason for demerit for integrity survey

Year	Cause
2016	Acceptance of golf and entertainment from partnering businesses
2017	Unlawful acceptance of traveling expenses

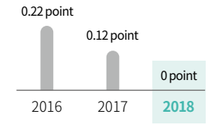
Improvements

Introduction of anonymous reporter compensation system

- Reward is paid even if unregistered report is made
- Promotion of 8 channels and new installation of a direct reporting line for standing auditor
- Revision of operating standards for participatory integrity and ethical activities

Performance of implementation (0 fraudulent acts)

Demerit of integrity survey



Promotion of Self-Participatory Fun Ethics Education

Korea East-West Power is pursuing ethics education in which all employees voluntarily participate. As a part of which, employees are producing Do-It-Yourself CF videos and game-based education related to ethics. In addition, we hold discussions and improve the corporate culture based on the details of the discussions held. Externally, we hold contests and lectures on integrity culture to help build an ethical society with external stakeholders.

Integrity-Based Win-Win Project and Expansion of an Ethical Culture of Coexistence

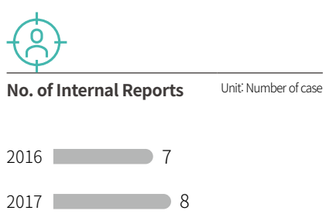
Korea East-West Power has dualized and implemented activities of ethical management in and outside of the company. In order to solidify a culture of mutual respect within the company, in 2018, we declared the 'New Ethical Management' to root out the practice of abuse of power and held discussions for each level of rank on five occasions. Meanwhile, Korea East-West Power acquired anti-corruption business management system (ISO 37001) certification across all of its business locations in 2017, and is performing integrity-based win-win projects externally, while supporting consulting review and the introduction of the anti-corruption business management system for private SMEs, thereby contributing to the expansion of ethical culture and enhancement of mutual confidence.

Self Monitoring of Ethical Management

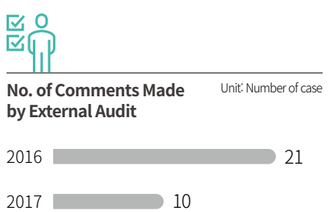
Strengthening of Internal Check System via Checklist

Korea East-West Power has strengthened the effects of monitoring and checks via a 3-phased internal system in order to realize an ethical corporate culture. The first phase ensures the development and provision of a self-diagnostic ethics checklist at the level of Audit & Inspection Division so that each working department can inspect ethical issues. The second phase ensures the strengthening of the ethics and compliance organization to allow in-house counsel to support the legal areas. Through the three phases, the company reintroduced the comprehensive audit system to reward anonymous reporters and to conduct internal audits. Since the introduction of the internal check system, the number of comments made by external auditors has declined for three years consecutively.

No. of Internal Reports Unit: Number of case



No. of Comments Made by External Audit Unit: Number of case

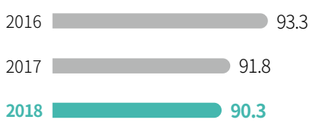


Self-Inspection Efforts and Performance Achievement via Monitoring

Korea East-West Power maintains ethical standards via constant monitoring of ethical management. Through the EMDEX and self-integrity survey, which it has developed in-house, Korea East-West Power manages the level of implementation of practical programs across eight areas such as the ethics-related system, governance, fair trade, human rights and labor practices, local communities and the environment. In 2018, the EMDEX fell to 90.3 points year on year, and we are implementing activities of improvement this year.

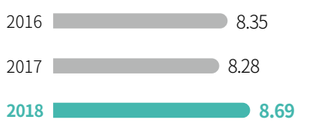
As a result of such inspection and efforts, Korea East-West Power achieved Class 1 for the integrity anti-corruption policy evaluation conducted by the Anti-Corruption & Civil Rights Commission, and acquired 8.69 points, which is a 5% increase year on year, whereby the ranking for integrity has climbed from 22nd to 13th. Moving forward, Korea East-West Power will continue to do its best to maintain the highest class possible in the ethics and integrity-related evaluation.

EMDEX (Self Ethics Index) Unit: Points



Anti-Corruption Policy Evaluation of the Anti-Corruption & Civil Rights Commission Unit: Class

Comprehensive Integrity of the Anti-Corruption & Civil Rights Commission Unit: Points



Risk Management

Korea East-West Power implements company-wide risk management under the vision of 'Audit process that breathes vitality into the company and contributes to the promotion of social values'. We endeavor to operate an organization with integrity that meets social expectations by complying with the principles of audits performed in line with rules, audits performed with empathy, audits performed with integrity, and audits based on policy.

Risk Management System

We have an audit organization that operates with expertise and independence to effectively identify and prevent risks. Audit activities such as monitoring, daily audit, and specific audit are also conducted, concurrently with whistleblowing activities such as Sinmungo(individual petition) and red whistle. For the first time in the power generation industry, other environmental risks are being managed separately, and their details are reported in the environmental section (pp. 52-57).

Mission of audit	**Promote and protect the Company's value by providing objective verification and insight**
Vision of audit	**Audit process that breathes vitality into the company and contributes to the promotion of social values**
	Auditing policy: audits performed in line with rules · audits performed with empathy · audits performed with integrity · and audits based on policy
	Core values: Striving for the best · sustainable innovation · trust and respect · communication and cooperation

Strategic goal of audit	Operational efficiency	Strengthen publicness	Social communication	Expansion of integrity
Strategic direction of audit	❶ Improvement of audit infrastructures	❷ Reinforcement of audit activities	❸ Strengthen communication and cooperation	❹ Improve anti-corruption and integrity
Strategic task of audit	· Secure independence of audit organization · Strengthen auditor's expertise · Advance audit system	· Prevent non-compliance and strengthen audits based on policy · Build an efficient foundation for internal control · Support the creation of a working atmosphere	· Facilitate communication inside the Company · Strengthen external cooperation and exchange · Strengthen social demand management system	· Establish a sound trading order · Strengthen anti-corruption activities · Lead a culture of integrity and ethics

Fraud Reporting Procedure

Report
(By internal or external reporter)

Reception of report & notification to department in charge
(Audit & Inspection Division and self audit organization)

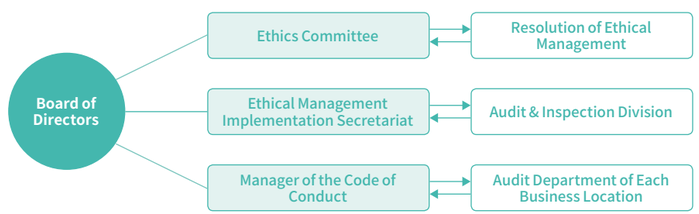
Processing of report
(Processing by department in charge within 7 days of the report)

Notice processing result
(Department in charge → Reporter)

Risks Management Organization & Risks of Fraud Reporting Procedure

The Ethics Committee, which operates directly under the Board of Directors, establishes overall policies and regulations related to ethical management. The Ethical Management Implementation Secretariat oversees ethical practices in accordance with important policies to establish implementation plans, promotes and provides training to employees. Audit & Inspection Division secures a systemic mechanism to prevent corruption and collects reports on irregularities to manage the risk of fraud.

Audit Organization



Stakeholder Engagement

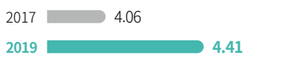
The CEO and management of Korea East-West Power have established and operated a communication channel with stakeholders. In order to ensure customized communication, we are expanding our mobile and open channels to build communication strategies with an empathy centric-paradigm in which parties directly participate. In addition, to listen to voices on site, lectures by the CEO are offered to reinforce onsite communication and to build a system where citizens can participate and suggest ideas themselves.

CEO's Onsite Management Activities
29 times

Discussion Forums for All Employees
62 times

Stakeholder Awareness Relating to Sustainable Management

Comparison of Responses and Results for 2 Years ('17 vs. '19) Unit: %



Comparison of Responses by Stakeholders Unit: %

ommunication Channel for Stakeholders

Classification	Communication Channel	Purpose
Online communication	CEO's letter and management message	Share business management issues and motivate employees
	SNS	Collect diverse opinions via informal conversations
	Messenger communication	Collaborate via rapid information sharing and communication
Offline communication	CEO's onsite management activities	Encourage employees and emphasize safety workplace
	Discussion forums	Discuss specific issues(new technology, safety management, future directions of company etc.) with all employees regardless of position

Stakeholder Awareness Survey

Korea East-West Power has conducted stakeholder surveys on key topics to identify the awareness of internal and external stakeholders regarding sustainable management. The awareness of stakeholders surrounding Korea East-West Power's sustainability and social responsibility averaged 4.41 points, which is 0.35 points up from 2017. The evaluation of Korea East-West Power's level of sustainable management indicated that internal employees are more positive than external stakeholders, so the company intends to strengthen activities to improve external perception moving forward.

In a questionnaire on the connection with the Sustainable Development Goals (SDGs) established by the United Nations for global sustainable development, the stakeholders have answered 'guarantee of universal energy service,' 'climate change and response to its impact', and 'productive employment and creation of quality jobs' as the issues that Korea East-West Power can most effectively tackle.

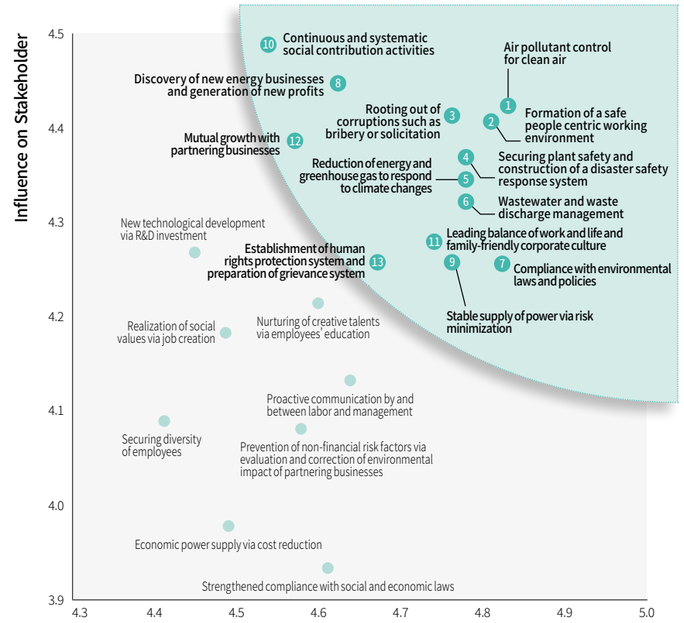
UN SDGs selected by Stakeholders

Materiality Assessment

Korea East-West Power conducted materiality assessment in accordance with the Global Reporting Initiative (GRI) process in order to focus on significant issues that stakeholders have selected. Considering internal and external influences and interests, thirteen important topics were selected, and we will systematically manage the corresponding issues continuously in the future.

Materiality Assessment Results

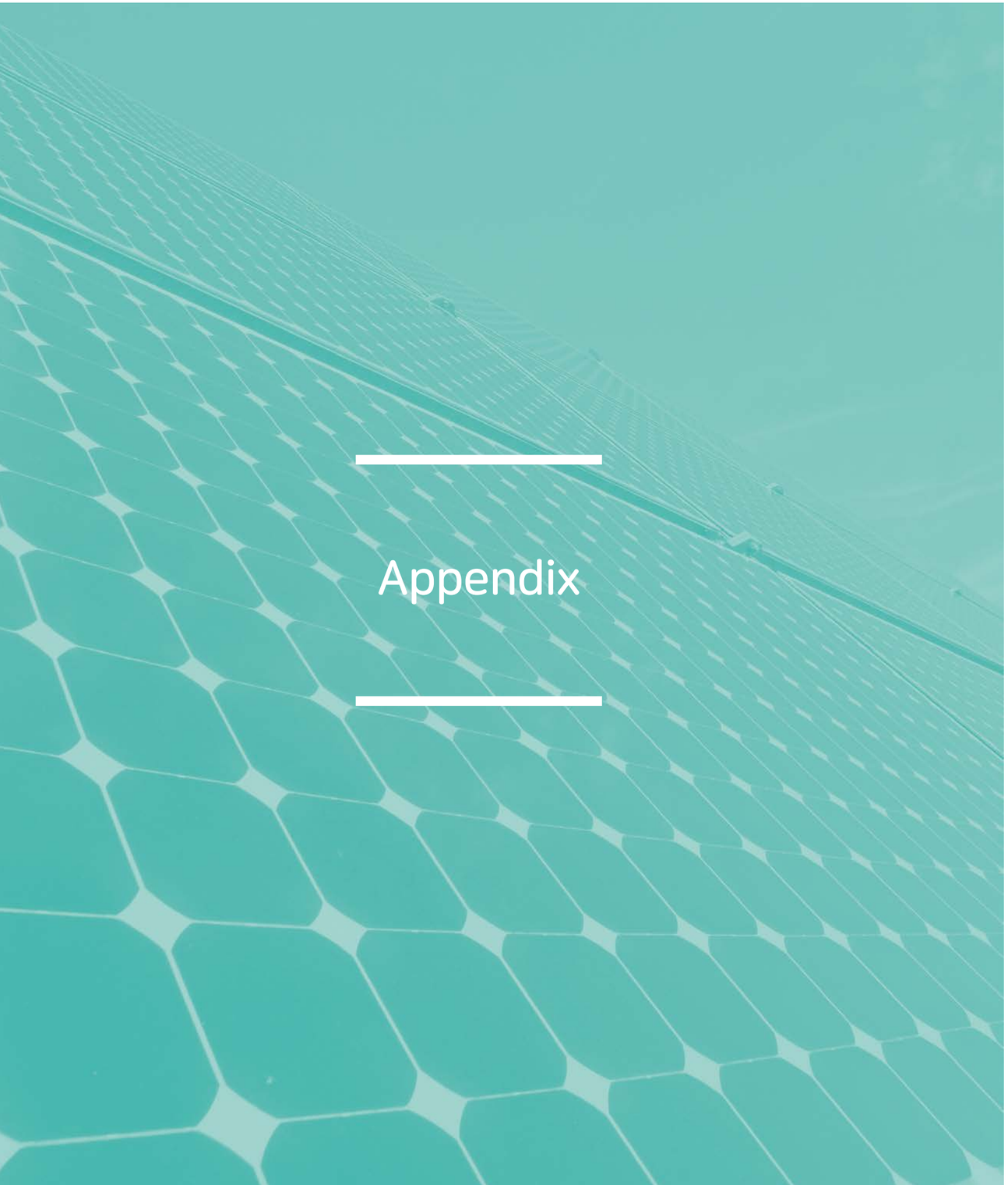
1. Air pollutant substance control for clean air
2. Creation of a safe working environment centered on people
3. Eradication of corruption such as bribery or solicitation of any form
4. Securing power plant safety and establishment of a disaster safety response system
5. Reduction of energy and greenhouse gas to respond to climate change
6. Wastewater and waste discharge management
7. Compliance with environmental laws and policies
8. Discovery of new energy businesses and generation of new profits
9. Stable power supply via minimization of risk
10. Continuous and systematic social contribution activities
11. Development of a work and life balance and family friendly corporate culture
12. Mutual growth with partnering businesses
13. Development of a human rights protection system and establishment of a grievance handling system



Scope of Stakeholders' Influence

Reporting Point of Each Issues	Material Issues	Internal stakeholders intimately related to the issues	External stakeholders intimately related to the issues			
		Employees	Government agencies and local governments	Partner companies and power companies	Local communities and residents	Shareholders
Sustainable Power Generation Keeping People in Mind	2 4 9	●		●		
Eco-Friendly Power Generation	1 5 6 7	●	●		●	
Strengthening Business Competitiveness through Change and Innovation	8		●			●
A Workplace Where Our People are Happy	11 13	●				
Sharing Hope through Local Companionship	10 12			●	●	

*The content related to the 'Eradication of corruption such as bribery or solicitation of any form' selected as the 3rd highest material issue was reported in the Ethical Management Chapter (pp.70-72).



Appendix

Facts & Figures

Financial Performance

Summary of Separate Statement of Financial Position

Classification	Unit	2016	2017	2018
Current Assets	KRW 100million	9,374	10,615	10,242
Non-Current Assets	KRW 100million	80,306	77,940	77,202
Total Assets	**KRW 100million**	**89,680**	**88,555**	**87,444**
Current Liabilities	KRW 100million	17,473	14,114	7,085
Non-Current Liabilities	KRW 100million	27,417	27,928	33,839
Total Liabilities	**KRW 100million**	**44,889**	**42,042**	**40,925**
Paid-in Capital	KRW 100million	22,186	22,186	22,186
Retained Earnings	KRW 100million	23,634	24,969	24,442
Other Capital Components	KRW 100million	△1,029	△642	△109
Total Equity	**KRW 100million**	**44,790**	**46,513**	**46,519**

Summary of Separate Comprehensive Income Statement

Classification	Unit	2016	2017	2018
Sales	KRW 100million	42,109	46,443	49,335
Cost of Goods Sold	KRW 100million	34,474	40,922	47,578
Gross Profits	KRW 100million	7,635	5,521	560
Sales and Administrative Expenses	KRW 100million	828	1,195	1,197
Operating Profits	KRW 100million	6,807	4,326	560
Other Revenue	KRW 100million	254	218	161
Other Costs	KRW 100million	62	148	57
Financial Income	KRW 100million	705	2,153	1,100
Financial Cost	KRW 100million	1,337	3,263	1,840
Earnings (Losses) Before Taxes	KRW 100million	6,212	3,267	△105
Income Tax Expenses	KRW 100million	1,536	1,091	△138
Net Income	KRW 100million	4,676	2,176	33

Economic Performance

Classification	Item		Unit	2016	2017	2018
Installed capacity			MW	11,169.90	11,182.60	11,189.37
Power Generation Volume	Fossil fuel	Coal	GWh	38,785	41,189	41,227
		LNG	GWh	7,296	7,527	9,446
		Oil	GWh	5,730	2,086	2,480
		Subtotal	GWh	51,810	50,802	53,153
	New renewable	Overall	GWh	293	315	322
	Company	Overall	GWh	52,104	51,117	53,475
Sales Volume			KRW 100million	46,603[1]	48,372	50,766
Unit Sales Price			KRW 100million	85.922[2]	91.92	94.1
Forced Outage Rate			%	0.062	0.039	0.027
Unplanned Loss Rate			%	0.163	0.069	0.056
Operation Rate			%	85.6	90.36	85.17
Utilization rate			%	57.08	52.22	54.57
Thermal Efficiency			%	39.02	39.36	40.03
Power Station Internal Load			%	5.74	5.69	5.39
Employees	Salary, welfare costs		KRW 100million	1,942	2,304	2,487
Shareholders	Dividends		KRW 100million	944	614	10
Creditors	Interest expenses		KRW 100million	684	982	1032
Government	Corporate taxes, local taxes		KRW 100million	1,901	1,864	200
Local Community	Social contribution, donations		KRW 100million	39	39	38
Reinvestment	Surplus excluded from dividends		KRW 100million	3,765	1,596	24

1. Previous data reported are revised due to the exclusion of trial operation
2. Previous data reported are revised due to the exclusion of trial operation

Environmental Performance

Classification	Item	Unit	2016	2017	2018
Greenhouse gas	Greenhouse gas emissions (Scope1+2)	1,000 tons CO_2-eq	39,742	38,575	39,516
	Greenhouse gas emissions (Scope3)		9,487	11,029	12,813
Energy consumption	Energy consumption volume	TJ	481,624	463,403	484,063
	Energy source unit	GJ/MWh	9.30	9.12	9.05
Fuel usage	Coal	10,000 tons	1,452	1,659	1,654
	Oil	1,000 KL	1,186	363	426
	LNG	1,000 tons	1,038	1,080	1,354
Air pollutant emissions	SOx	ton	12,741	12,082	10,932
	NOx	ton	21,965	15,988	13,308
	Dust	ton	612	480	523
Air pollutant unit emissions	SOx	ton/GWh	0.2602	0.2379	0.2057
	NOx	ton/GWh	0.4487	0.3148	0.2504
	Dust	ton/GWh	0.0125	0.0095	0.0098
Water pollutant emissions	COD	ton	21	14	13
	SS	ton	10	7	8
	T-N	ton	33	20	22
	T-P	ton	0.3	0.05	0.09
Wastewater unit discharge	COD	Kg/GWh	0.41	0.28	0.25
	SS	Kg/GWh	0.19	0.14	0.15
	T-N	Kg/GWh	0.64	0.40	0.41
	T-P	Kg/GWh	0.010	0.001	0.002
Total water usage		1,000 tons	12,763	12,226	12,821
Seawater	Seawater usage	1,000 tons	5,075	6,587	6,187
Wastewater generation volume		1,000 tons	4,006	4,090	3,948
Total waste generation volume		1,000 tons	1,965	2,054	2,153
Recycled		1,000 tons	1,706	1,559	1,644
Waste recycling rate	Waste recycling rate	%	-	-	76
Desulfurized plaster generation volume		1,000 tons	509	472	430
Desulfurized plaster recycling volume		1,000 tons	507	411	434
Cinder generation volume		1,000 tons	1,881	2,021	2,117
Cinder recycling volume		1,000 tons	1,699	1,531	1,615

Social Performance

Classification	Item		Unit	2016	2017	2018
Total number of employees			people	2,330	2,407	2,460
Status of employees- By type of employment	Full time	Total	people	2,330	2,407	2,460
		Women	people	261	282	307
		Men	people	2,069	2,125	2,153
	Part time	Total	people	22	17	20
		Women	people	4	4	1
		Men	people	18	13	19
	Non affiliated manpower		people	863	975	978
Status of employees- By type of hiring	Full day working system		people	2,330	2,407	2,460
	Part time		people	0	0	0
Status of employees- By location of workplace	Domestic		people	-	-	2,449
	Overseas		people	-	-	11
Diversity of the board of directors	Women		people	0	0	1
	Men		people	5	5	5
	Less than age 30		people	0	0	0
	30-50 years of age		people	0	0	2
	Over 50 years of age		people	5	5	3
Diversity of employees	Ratio of the disabled		%	3.4	3.6	4.1
	Ratio of women		%	11.2	11.7	13.8
	Number of women managers		people	32	37	37
	Ratio of women managers		%	4.9	5.6	5.7
No. of new hires	Women		people	33	29	27
	Men		people	122	70	117
	Less than age 30		people	118	81	116
	30-50 years of age		people	31	18	22
	Over 50 years of age		people	6	0	6
Hires for social equity	New hires		people	151	99	144
	Talents of non-metropolitan area		people	77	55	88
	Men of national merit		people	10	9	14
	High school graduates		people	27	22	7
	Disabled		people	4	8	7
	Women		people	33	29	27
Employment security	Average years of continued service		Year	15.7	16.1	16.1
	Turnover rate		%	0.69	0.58	1.46
Operation of Board of Directors	Number held		Time	13	13	11
	Agenda for resolution		Number of case	48	36	46
	Agenda for revised resolution		Number of case (%)	0 (0%)	1 (2%)	0 (0%)
	Agenda reported		Number of case	9	11	6
	Board of directors attendance rate		%	89	90	94
	Non-standing director attendance rate		%	90	87	100

Classification	Item		Unit	2017	2017	2018
Family-friendly management	On parental leave	Total	people	54	62	75
		Men	people	1	8	11
		Women	people	53	54	64
	Rate of reinstatement from parental leave		%	100	98.4	100
	Number of those continuously serving 1 year or longer since reinstatement after parental leave (%)	Men	people (%)	0	6(100%)	10(100%)
		Women	people (%)	53(98.1%)	47(97.8%)	60(100%)
	Women working under hour selection system		people	20	22	34
	On flexible working system		people	812	983	2,229
	Number of days on vacation		Day	14.8	17.4	21.6
Talent development	Average training hours per employee		Hour	211	220	252
	Educational expenses per employee		KRW 1,000	2,697	3,472	3,600
	Education budget		KRW 100million	63	82.5	89.5
	Education beneficiary		people	38,586	48,378	52,467
	Women employee competency index		Point	4.71	4.76	4.66[1]
Employees' satisfaction	Internal education satisfaction		Point	90.2	90.6	83.6[2]
	Personnel system satisfaction		%	4.38	4.46	4.44
Human rights policy and procedures	Number of those who completed ethics education		people	2,114	2,260	2,309
	Number of those who completed human rights education		people	2,271(99%)	2,277(99%)	2,266(94%)
Social contribution	Social contribution expenditure		KRW 100million	9	12	13
	Total hours volunteered		Hour	60,035	63,284	63,470
	Average hours volunteered per employee		Hour	26.7	28.76	27.35
Integrity assessment	Anti-Corruption & Civil Rights Commission's survey results		point	8.35	8.28	8.69
Anti-corruption policy evaluation	Anti-Corruption & Civil Rights Commission's survey results		rating	2	2	1
Labor union	Number of those subscribing to labor union		people	1,561	1,624	1,745
	Rate of labor union subscription		%	97.39	96.6	97.9
Occupational safety and health	Fatality rate		‰	0[3]	0	0
	Number of safety accidents		Number of case	0[4]	0[5]	0
	Level of maturity for safety culture		Point	4.03(level 4)	4.05(level 4)	4.07(level 4)
	Level of participation for safety culture		Point	4.21	4.33	4.55
Regional support project	Energy welfare for the marginalized		Household	1,613	622	621
	Purchase of Onnuri gift certificates		KRW 100million	7.6	8.8	6.93
	Purchase of social economy enterprise products	Social enterprise	KRW 100million	61.6	98.3	98.3
		Cooperative	KRW 100million	1.35	8.27	4.16
Information security violations	Number of incidences of leakage, theft and loss of customer data to the outside		Number of case	0	0	0
Anti-corruption violations	Anti-corruption violations (people)		Number of case (people)	0	0	0

1. Scores declined by change of competency indicators
2. Scores declined following reorganization of questionnaire for the satisfaction survey
3. Previous data reported are revised
4. Previous data reported are revised
5. Previous data reported are revised

GRI Content Index

Universal Standards

GRI 102: General Disclosure

Topic	Disclosure		Page Reported	Validation	ISO 26000	UN SDGs
Organizational profile	102-1	Name of the organization	6	○	6.3.10/ 6.4.1-6.4.2/ 6.4.3/6.4.4/ 6.4.5/6.8.5/7.8	
	102-2	Activities, brands, products, and services	8-11	○		
	102-3	Location of headquarters	6	○		
	102-4	Location of operations	8-11	○		
	102-5	Ownership and legal form	6	○		
	102-6	Markets served	8-11	○		
	102-7	Scale of the organization	6	○		
	102-8	Information on employees and other workers	80-81	○		
	102-9	Supply chain	12-13	○		
	102-10	Significant changes to the organization and its supply chain	No significant change	○		
	102-11	Precautionary principle or approach	73	○		
	102-12	External initiatives	87	○		
	102-13	Membership of associations	90	○		
Strategy	102-14	Statement from senior decision-makers	2	○	4.7/6.2/7.4.2	
Ethics and integrity	102-16	Values, principles, standards and norms of behavior	70-72	○	4.4/6.6.3	16
	102-17	Mechanisms for advice and concerns about ethics	73	○		
Governance	102-18	Governance structure	68-69	○	6.2/7.4.3/7.7.5	
	102-21	Consulting stakeholders on economic, environment, and social topics	75	○		
	102-22	Composition of the highest governance body and its committees	68-69	○		
	102-23	Chair of the highest governance body	68-69	○		
	102-24	Nominating and selecting the highest governance body	68-69	○		
	102-31	Review of economic, environmental and social topics	75	○		
Stakeholder engagement	102-40	List of stakeholder groups	74	○	5.3	
	102-41	Collective agreement	Collective agreement application rate: 100%	○		
	102-42	Identifying and selecting stakeholders	74	○		
	102-43	Approach to stakeholder engagement	74	○		
	102-44	Key topics and concerns raised	75	○		
Reporting practice	102-45	Entities included in the consolidated financial statements	77	○	5.2/7.3.2/ 7.3.3/7.3.4	
	102-46	Defining report content and topic boundaries	75	○		
	102-47	List of material topics	75	○		
	102-48	Restatement of information	78, 81	○		
	102-49	Changes in reporting	No significant change	○		
	102-50	Reporting period	About this report	○	7.5.3/7.6.2	
	102-51	Date of most recent report	About this report	○		
	102-52	Reporting cycle	About this report	○		
	102-53	Contact point for questions regarding the report	About this report	○		
	102-54	Claims of reporting in accordance with the GRI Standards	About this report	○		
	102-55	GRI Content Index	82-86	○		
	102-56	External assurance	88-89	○		

Topic-specific Standards

GRI 200: Economic Disclosures

Topic	Disclosure		Page Reported	Validation	ISO 26000	UN SDGs
Economic Performance						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	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	77-78	○	6.8.1-6.8.2/ 6.8.3/6.8.7/ 6.8.9	8
Indirect Economic Impacts						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	103-2	The management approach and its components		○		
	103-3	Evaluation of the management approach		○		
Indirect Economic Impacts	203-2	Significant indirect economic impacts	16-17	○	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	8
Anti-corruption						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	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	70-72 (Number of anti-corruption violations: 0case)	○	6.6.1-6.6.2/ 6.6.3	16
	205-2	Communication and training about anti-corruption policies and procedures	70-72 (Number of those who completed ethics education: 2,309people)	○		

Topic-specific Standards

GRI 300: Environmental Disclosures

Topic	Disclosure		Page Reported	Validation	ISO 26000	UN SDGs
Materials						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	103-2	The management approach and its components		○		
	103-3	Evaluation of the management approach		○		
Materials	301-2	Recycled input materials used	57	○	6.5.4	
Energy						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	103-2	The management approach and its components		○		
	103-3	Evaluation of the management approach		○		
Energy	302-1	Energy consumption within the organization	79	○	6.5.4	
Emissions						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	103-2	The management approach and its components		○		
	103-3	Evaluation of the management approach		○		
Emissions	305-1	Direct (Scope1) GHG emissions	79	○	6.5.5	
	305-2	Energy indirect (Scope2) GHG emissions	79	○		
	305-3	Other indirect (Scope3) GHG emissions	79	○		
	305-5	Reduction of GHG emissions	56	○		
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx) and other significant air emissions	79	○	6.5.3	
Effluents and Waste						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	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	79	○	6.5.3/6.5.4	
	306-2	Waste by type and disposal method	79	○	6.5.3	
	306-4	Waste by type and disposal method	55	○	6.5.3	

GRI 400: Social Disclosures

Topic	Disclosure		Page Reported	Validation	ISO 26000	UN SDGs
Employment						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	103-2	The management approach and its components		○		
	103-3	Evaluation of the management approach		○		
Employment	401-1	New employee hires and employee turnover	80-81	○	6.4.3	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	64-65	○	6.4.4/6.8.7	
	401-3	Parental leave	80-81	○	6.4.4	
Labor/Management Relations						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	103-2	The management approach and its components		○		
	103-3	Evaluation of the management approach		○		
Labor/ Management Relations	402-1	Minimum notice periods regarding operational changes	Notify at least 50 days before on changes in management	○	6.4.3/6.4.5	
Occupational Health and Safety						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	103-2	The management approach and its components		○		
	103-3	Evaluation of the management approach		○		
	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	80-81	○	6.4.6/6.8.8	
	403-3	Workers with high incidence or high risk of diseases related to their occupation	48	○		
Training and Education						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	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	80-81	○	6.4.7	
	404-2	Programs for upgrading employee skills and transition assistance programs	62	○	6.4.7/6.8.5	

GRI 400: Social Disclosures

Topic	Disclosure		Page Reported	Validation	ISO 26000	UN SDGs
Diversity and Equal Opportunity						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	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	80-81	○	6.2.3/6.3.7/ 6.3.10/6.4.3	
Non-discrimination						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	103-2	The management approach and its components		○		
	103-3	Evaluation of the management approach		○		
Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	61	○	6.3.6/6.3.7/ 6.3.10/6.4.3	
Human Rights Assessment						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	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	80-81 (Number of those who completed human rights education: 2,266people, 94%)	○	6.3.5	
Local Communities						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	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	42-43	○	6.3.9/ 6.5.1-6.5.2/ 6.5.3/6.8	
Customer Privacy						
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary		○		
	103-2	The management approach and its components		○		
	103-3	Evaluation of the management approach		○		
Customer Privacy	418-1	Substantiated complaints regarding concerning breaches of customer privacy and losses of customer data	80-81 (Number of leakage, theft, or loss of customer data to the outside: 0case)	○	6.7.1-6.7.2/ 6.7.7	

UNGC Advanced Level*

	Topic	Description	Page	GRI Contents
1	Strategies and Operations	The COP describes mainstreaming into corporate functions and business units.	8-15	GRI 102-2
2		The COP describes value chain implementation.	12-13	GRI 102-2
3	Human Rights	The COP describes robust commitments, strategies or policies in the area of human rights.	70	GRI 103-1
4		The COP describes effective management systems to integrate the human rights principles.		GRI 103-2
5		The COP describes effective monitoring and evaluation mechanisms of human rights integration.		GRI 103-3
6	Labor	The COP describes robust commitments, strategies or policies in the area of labor.	66-69	GRI 103-1
7		The COP describes effective management systems to integrate the labor principles.		GRI 103-2
8		The COP describes effective monitoring and evaluation mechanisms of labor principles integration.		GRI 103-3
9	Environmental Management	The COP describes robust commitments, strategies or policies in the area of environmental stewardship.	58-63	GRI 103-1
10		The COP describes effective management systems to integrate the environmental principles.		GRI 103-2
11		The COP describes effective monitoring and evaluation mechanisms for environmental stewardship.		GRI 103-3
12	Anti-corruption Management	The COP describes robust commitments, strategies or policies in the area of anti-corruption.	28-31	GRI 103-1
13		The COP describes effective management systems to integrate the anti-corruption principle.		GRI 103-2
14		The COP describes effective monitoring and evaluation mechanisms for the integration of anti-corruption.		GRI 103-3
15	UN Goals and Issues	The COP describes core business contributions to UN goals and issues.	42-49	GRI 102-12~13
16		The COP describes strategic social investments and philanthropy.	42, 48-49	GRI 413-1
17		The COP describes advocacy and public policy engagement.	42-47	GRI 203-1~2
18		The COP describes partnerships and collective action.	90	GRI 102-13
19	Governance and Leadership	The COP describes CEO commitment and leadership.	5, 26-27	GRI 102-14
20		The COP describes Board adoption and oversight.	27	GRI 102-18
21		The COP describes stakeholder engagement.	32	GRI 102-40,42,43,44

***UNGC(UN Global Compact) Advanced Level:** It is the criteria for the implementation and reporting of social responsibility in accordance with the UN Global Compact, which is a voluntary initiative promoting and encouraging corporate social responsibility. It is categorized into 21 criteria in 7 fields; Strategy& Operation. Human Rights, Labor, Environment, Anti-corruption, UN Goals & Issues, and Sustainable Governance & Leadership.

Third-party Assurance Statement

Dear Korea East-West Power Generation Co., Ltd. and Stakeholders,

■ Introduction

Industry Entertainment Convergence Association ('IECA') was commissioned by Korea East-West Power Generation ('EWP') to perform a Third-party Assurance Engagement of '2019 EWP Sustainability Report' (the 'Report'). IECA presents independent opinions to the result of feasibility of the data contained in this Report. EWP has sole responsibility for contents and performance contained in this Report.

■ Independence

As an independent assurance agency, IECA does not have any kind of commercial interest in businesses of EWP apart from undertaking a third-party assurance on the Report. We have no other contract with EWP that may undermine credibility and integrity as an independent assurance agency.

■ Assurance Standards and Level

IECA checked the three principles of inclusivity, materiality, and responsiveness in combination with information credibility of the Report based on the GRI Standards.

■ ASSURANCE TYPE, SCOPE AND LIMITATIONS

We performed Assurance Engagement in accordance with GRI Standards. This implies that we verified the accuracy and quality of the statements made by EWP and the sustainability performance data included in this Report. The scope of verification is a period from Jan 1, 2018 to Dec 31, 2018, and depending on the content, the assurance engagement primarily includes the systems and initiatives undertaken by EWP including its system and action for sustainable 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.

■ METHODOLOGY

The Assurers collected data, information, and evidence via following method.

- Media coverage on sustainable management of EWP
- Verification on the management system and process implemented in sustainable management improvement and Report writing.
- Crosscheck between financial performance data in the Report and the data in the Assurers' report on the Company's financial statements and disclosures
- Track and examine internal documents and basic data

■ ASSURANCE RESULTS AND OPINIONS (On an assurance principle/process level)

The Assurers 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. Assurers were not aware of any significant errors or inappropriate descriptions in this Report during the Assurance Engagement. As such, we present our opinions of the 2019 EWP Sustainability Report as follows.

Inclusivity

- **Did EWP include the stakeholders in the process of strategic response on the sustainability?**

  The Assurers verify that EWP is making full effort for stakeholders' participation in promoting sustainable management, and we assured procurement and operation of diverse stakeholder participation process. EWP has selected stakeholders including public sector, employees, corporate customers, individuals, partner companies, local communities and local government body to receive diverse feedbacks and opinions.

Materiality

- **Did EWP include material information in the Report for the stakeholders' fair judgement?**

  The Assurers are not aware of any significant omissions or exclusions of data that is material to stakeholders. We verified that EWP conducted materiality test with issues identified from analyses of internal and external environments and reported accordingly to the result found.

Responsiveness

- **Did EWP response in accordingly to the demand and interest of the stakeholders?**

  The Assurers have verified EWP reflect and respond to various opinions collected through the stakeholders' communication channels. The Assurers have found no evidence EWP responses to material issues involving stakeholders were misrepresented or misstated in the Report.

Impact

- **Did EWP properly monitor the impact on the stakeholders?**

  The Assurers have verified EWP responded stakeholders' needs and interests through reflecting stakeholders' opinions in the Report. We are not aware of any evidence that EWP's response to significant issues of stakeholders was reported inappropriately.

■ GRI STANDARDS STANDARD APPLICATION

The Assurers have verified that the Report was prepared in accordance with the Core Option of GRI Standards. Based on the data provided by EWP, contents in relation to Universal Standards and Topic-specific Standards are confirmed facts.

Universal Standards

The Assurers have verified that the Report complied with the requirements of Core Option of GRI Standard and the following indices.

102-1 to 102-13 (Organizational profile), 102-14 (Strategy), 102-16 to 102-17 (Ethics and integrity), 102-18 (Governance), 102-40 to 102-44 (Stakeholder engagement), 102-45 to 102-56 (Reporting practice), 103 (Management approach)

Topic-specific Standards

The Assurers have verified that specified disclosure list on Material Aspect that was deduced disclosure list determination process, and the following indices.

- Economic: 201-1, 203-2, 205-2
- Environmental: 301-2, 302-1, 305-1, 305-2, 305-3, 305-5, 305-7, 306-1, 306-2, 306-4
- Social: 401-1, 401-2, 401-3, 402-1, 403-2, 403-3, 404-1, 404-2, 405-1, 406-1, 412-2, 413-1, 418-1

■ OPINIONS AND RECOMMENDATIONS (Performance/Issues)

The Assurers offer the following proposal to implement strategies in sustainability management in response to the issues with coherence at an organizational level in EWP.

Economic performance

Korea East-West Power responds promptly to changes in the energy paradigm, while contributing to economic development through ensuring a stable supply of electricity by forecasting and preparing for the power demands of both society and industry. The corporation pursues a continuous dialogue with stakeholders in order to contribute to eco-friendly national development through environmental improvement and the promotion of resource circulation. Beyond these efforts, Korea East-West Power is striving to achieve mid-to-long-term management goals such as management based on sound ethical principles and taking on autonomy and responsibility, open management practiced based on trust and confidence, and value management practiced to realize social values, etc. For this reason, I recommend that Korea East-West Power continue to improve its comprehensive response from a long-term perspective, such as by practicing continuous risk management of financial and non-financial factors and strengthening preemptive responses to changes in the management environment.

Environmental performance

The grave environmental crisis facing the globe is raising the environmental awareness of the public, and the demand for a pleasant environment is also rising due to the growth of citizenship following economic growth. As Korea's representative power plant operating public enterprise, Korea East-West Power's efforts to conduct clean energy research and technological development, in areas that include renewable energy, energy efficiency, and advanced and cleaner fossil fuel technology, are quite positive. However, while the government has a great impact on energy policy making and implementation, Korea East-West Power's goals and roles in the introduction, development and implementation performance of the new and renewable energies specified in the report relative to other power generation companies will need to be further clarified. That is, it is unclear to what extent Korea East-West Power plays a role in the generation of renewable energy. The same is true for the reduction of fine dust. That said, insofar as the main policies of the natural and living environment are concerned, I recommend that the company set the scope of work for each issue and disclose its quantitative goals and to what extent each goal is to be achieved in the report, thereby building a system for managing and reporting on the performance indicators.

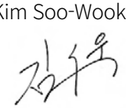
Social performance

Korea East-West Power aims to contribute to Industry 4.0 by creating new businesses for the future, such as by implementing a smart power plant and building an integrated platform for power generation operation using its own power generation operation system, power generation specialized manpower, operational expertise, and its business locations' database. This reflects Korea East-West Power's commitment to growing into an organization which creates sustainable social values. I recommend that the company prepare even more proactive sustainable power generation goals and act as the driving force to implement social values by presenting key plans for subsequent years for each strategy for the sustainable power generation goals, future plans and prospects, and long-term quantitative goals. Finally, I recommended that Korea East-West Power continue to communicate with its stakeholders through the sustainability management report.

October 2019

President of the Industry Entertainment Convergence Association

Kim Soo-Wook



Membership of Associations

Organization	Purpose	Time of Membership
Korea Plant Industries Association	Support for overseas advancement of domestic companies and exchange of information among member companies	2019.06
Korean Association for Supporting the SDGs for the United Nations (ASD)	Participate in information exchange and domestic and international events for Sustainable Development Goals	2019.04
Korea Photovoltaic Industry Association	A Study on the Technical Trends and Information Exchange among Members	2019.03
Korea Environment Engineers Association	Exchange of data on new environmental technologies and securing the latest environmental information	2018.01
Maritime Rescue & Salvage Association	Private-public cooperation to prevent and respond to maritime disasters and accidents	2013.05
Korea Institute of Enterprise Architecture	Gathering of information on the advancement of EA level	2013.03
Korea New & Renewable Energy	Exchange of information on new & renewable energy	2013.01
Korea Smart Grid Association	Exchange of information on smart grid and examination of the industry trend	2012.07
Korea Engineering and Consulting Association	Design and technical support through certification of engineering performance and entry into new businesses	2012.07
Korea Green Business Association	Support of large and small greenhouse gas mentor projects	2012.03
Korea Association of Small Business Studies	Quick response to government policy and interchange of academic information with the organization that is part of the government policy for shared growth	2011.07
Association of the Electric Supply Industry of East Asia and the West Pacific (AESIEAP)	Gathering of information on entry into and development of overseas business	2011.02
Korea Carbon Capture and Storage Association	Exchange of information on carbon capture and storage	2010.09
Power Generation Studies Institute	Advancement of power generation industry and identification of joint research subjects	2010.07
Korea Project Management Association	Improvement of project execution capability	2008.03
Korea Electric Engineers Association	Promotion of R&D of power technologies and education/training of professionals in power	2008.03
Korea Suggestion System Association	Information on the promotion of in-house suggestions and small-group activities	2007.05
World Energy Congress	Building of human and technology network with international energy organizations and member countries	2007.01
UN Global Compact (UNGC)	Exchange of information on sustainability and participation in domestic and international exchange events	2006.06
The Electric Utility Cost Group (EUCG)	Acquisition of international power information and benchmarking	2006.01
Korea New & Renewable Energy	Gathering of information on entry into and development of overseas business	2004.03
Korean Standards Association	Introduction of advanced quality management technique and spread of quality management mind	2003.01
Korea Electric Association	Enactment and amendment of electrical industry's technology standard and development of new code for enhancement of power generator reliability	2002.09
The Korean Society of Mechanical Engineers	Examination of domestic and overseas trends in machinery and exchange of information	2002.08
The Korean Institute of Electrical Engineers	Examination of domestic and overseas trends in electricity and exchange of information	2002.06
Korea Energy Foundation	Energy welfare programs such as assistance of low-income families and scholarship programs	2002.05
Korea Electric Association (KEPIC)	Determination of KEPIC development direction and securing fund	2002.05
Korea International Trade Association	Interchange of information related to international trade	2001.05

Awards

Agency	Description	Date
Ministry of Environment, Korea Enterprises Federation	9th Happy Plus Social Contribution Campaign Award for Excellence in Social Contribution	2019.02
Ministry of Trade, Industry and Energy	Presidential Award for Quality Control Group in the 43rd National Quality Competition	2018.11
Ministry of Trade, Industry and Energy	Minister's Commendation for Quality Management in the 43rd National Quality Competition	2018.11
Ministry of Trade, Industry and Energy and Ministry of SMEs and Startups	Prime Minister's Award in the 6th Korea's Beloved Companies	2018.11
Ministry of Employment and Labor	Outstanding Award for Competition in Excellence in Work and Life Balance	2017.12
Ministry of Personnel Management	Prime Minister's Award for 2017 HR Innovation Outstanding Practice Competition	2017.12
Minister of Strategy and Finance, Jobs Committee	Deputy Chairman's Award for Public Enterprise in Job Contest by Jobs Committee	2017.12
Ministry of Gender Equality and Family	Prime Minister's Award for Work and Life Balance	2017.12
Ministry of Trade, Industry and Energy	Minister's Award in 2017 Disaster Safety Management Assessment	2017.12
Ministry of SMEs and Startups, Korea Commission for Corporate Partnership	Presidential Award for Outstanding Company in Performance Sharing	2017.11
Ulsan City Social Workers Association	Social Workers Award of the Year in The 5th Ulsan Social Workers Competition	2017.11
Ministry of Trade, Industry and Energy	Presidential Award in 2017 New Technology Commercialization Competition	2017.11
KMR	2018 Grand Award for Safety Management in Global Standard Management Awards (GSMA)	2017.11
KORCHAM	KORCHAM Chairman's Award in the 24th Corporate Innovation Awards	2017.11
Ministry of Trade, Industry and Energy	Presidential Award in The 41st National Productivity Competition	2017.10
CDP Korea	2017 Special Award for CDP Carbon Management	2017.10
Ministry of Trade, Industry and Energy	2017 Minister's Award in Management Award for the Fourth Industrial Revolution	2017.08
Korea Society of Public Enterprise	Global R&D (GRD) Grand Award for Public Enterprises	2017.06
Ministry of Government Administration and Home Affairs	2016 Outstanding Public Enterprise for Implementation of Government 3.0 (Highest Rating)	2017.03

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ENRICH THE WORLD WITH CLEAN ENERGY

EWP Sustainability Report 2019

For more detailed information and PDF version, please visit the EWP website. Please place inquiries to the following contact details if you have any opinion about the activities and achievement of sustainability management on this report.

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