

Clean Energy, Smart KEPCO

VALUE
management

ETHICS
management

OPEN
management

INNOVATION
management



About This Report

We have prepared this 2018 Sustainability Report (“Report”) to share insights into our business plan and the progress we have made towards achieving the highest level of sustainability with our stakeholders.

Reporting Status

This is our 14th sustainability report since 2005.

Reporting Guidelines & Period

This Report has been prepared in accordance with the Core Option of the GRI (Global Reporting Initiative) Standards, ISO 26000 and UN Global Compact. The financial information presented in this Report conforms with IFRS (International Financial Reporting Standards).

This Report covers our sustainability performance for the past three years from 2015 to 2017. Both financial and non-financial information is presented based on our fiscal years in accordance with the internal disclosure system and any information not subject to the above standards is noted otherwise. However, qualitative activities concerning material topics up to August 2018 are included in this Report to ensure their prompt disclosure.

Report Boundary

This Report covers the sustainability practice of KEPCO (Korea Electric Power Corporation) and includes the data of six power generation companies (Korea Hydro & Nuclear Power, Korea South-East Power, Korea Midland Power, Korea Western Power, Korea Southern Power, and Korea East-West Power), fully owned by KEPCO when it comes to environmental investment, and air and water pollutants.

Independent Assurance

This Report has been externally assured by DNV GL to confirm the credibility and completeness of its contents, preparation process, and disclosed data. Detailed assurance report is on page 84, 85 of this Report.

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CEO Message



Dear stakeholders,

I would like to extend my heartfelt gratitude on behalf of KEPCO to all stakeholders who believed in us, strengthened us and supported us in 2017.

It is my great privilege to publish our 14th Sustainability Report and to communicate to you the progress, the challenges and the results within our sustainability work.

For more than 120 years, we have been at the forefront of the industrial development of our country by supplying high-quality power economically and reliably. Now, in the era of unprecedented change in the power industry triggered by the new climate regime and the Fourth Industrial Revolution, we are focusing our resources on creating a clean and efficient energy ecosystem under our new vision, "Clean Energy, Smart KEPCO". As a leading energy public corporation, we will continue to fulfill our social responsibilities and strengthen our competitive advantages in the global market.

"Gaining competitive advantages through digital innovation"

As the convergence of technology and industries accelerates, there is a growing demand for change and innovation in the power industry. At KEPCO, we focus on improving the efficiency in our power supply and providing new services that put customers first and responding to their needs through digital transformation across the technology, business and management systems. While strengthening the foundation for both domestic and overseas projects we are currently undertaking through systemic risk management, we will develop new markets with a focus on renewable energy sectors to gain a competitive advantage.

"Paving the way for eco-friendly energy future through energy transition"

The adoption of the Paris Agreement opened the way to a new climate regime, and the reduction of carbon emissions through renewable energy has become the main focus of environmental strategies around the world. In response to this trend, we developed a compliance system among power group companies for GHG emissions and fine dust particulate matter reduction, focusing our efforts on building eco-friendly facilities and technological innovation. We will continue to drive the transition to renewable energy and put environmental protection and safety of people first.

"Creating synergy to drive mutual growth through communication and cooperation"

By relocating our head office in Naju, we are going to create an energy valley with the aim of attracting 500 energy companies to create more than 30,000 jobs by 2020. To this end, we focus on accelerating and incubating startups, helping SMEs with exports and joint R&D projects as part of our efforts to boost local economies and create an ecosystem for mutual growth. We will continue to build and drive mutual growth through close communications with our local community and suppliers, and fair and transparent supply chain management.

"Building trust and creating social values"

At KEPCO, our priorities are to increase the discount on electric bills for the vulnerable population including low-income families, multicultural families, small business owners, development of new ICT-based mobile services, and customer service infrastructures.

We are committed to creating full-time jobs, hiring interns and local talents, and supporting startups to build an ecosystem for sustainable job creation.

As a global utility, we will maintain close communications with our stakeholders including customers and shareholders, and lead the new energy ecosystem through transparent and ethical practice.

Your continued interest and support will be greatly appreciated.

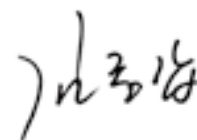
Thank you.

September 2018

JongKap KIM

President & CEO

KEPCO

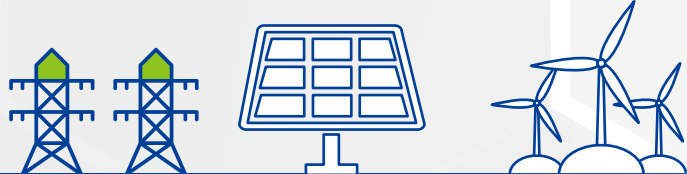
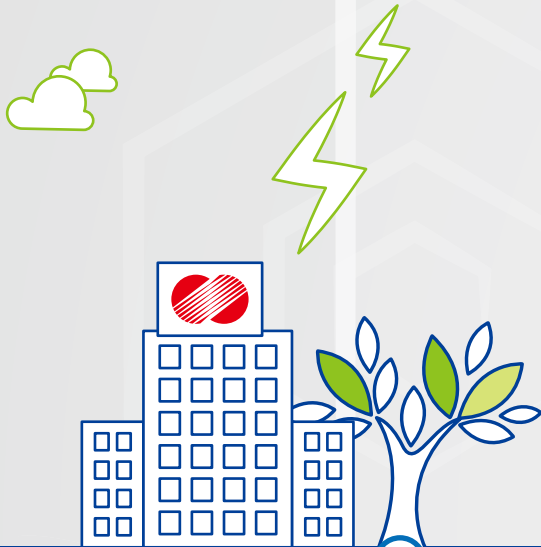




KEPCO Highlights

Result of Historical Research on the Power Industry

Harry Bostwick¹⁾ the U.S. partner of Hansung Electric Power²⁾, the first power company in Korea, donated some historical documents. The documents were discovered during a data search conducted in the US by Professor Oh Jin-Suk and his team from Baejae University. The discovery is considered to be a major accomplishment as part of the history research program. Rare documents including a letter from Emperor Gojong were expected to contribute to the study of electrical history in Korea.



2017

05

07

10

Ranked 2nd in the 'Forbes Global 2000' Corporate Ranking in Power Utility Category

KEPCO was ranked 2nd in the power utility sector and 138th in the Forbes Global 2000 rankings thanks to its consistent risk management and superior facility operation that leads to cost reduction and financial stability despite the volatile exchange rate, oil prices, and environmental regulations.



Selected the Top CDP³⁾ Company in the Energy & Utilities Sector for Two Consecutive Years

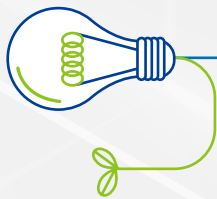
KEPCO has submitted Climate Change Report to CDP to share our carbon emission and data with 803 investors worldwide. In 2017, we received 'Leadership A' rating in the energy and utilities sector for the second consecutive year in recognition of our commitment to transparency in GHG information disclosure and efforts to reduce emissions.

¹⁾ Bostwick: the partner of Collbran & Bostwick Co. managed Hansung Electric Power as a General Manager.
²⁾ Hansung Electric Power: Incorporated on January 26, 1898, with the petition submitted by Kim Du-Seung and Lee Geun-Bae, which was approved by permission of the Ministry of Agriculture, Commerce and Industry.
³⁾ CDP (Carbon Disclosure Project): a global council that assesses the carbon emission reduction initiatives of 500 of the world's largest companies, ranked by market capitalization according to the FT500 Global Index.



KEPCO Built the Largest FR ESS

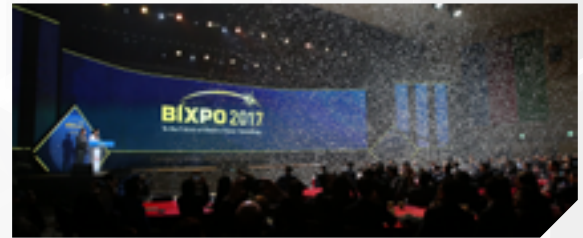
KEPCO built the world's largest FR ESS⁴⁾. FR ESS is designed to replace the existing frequency regulation system and improve the quality of electric power and cost efficiency. The commercial operation of the 376MW FR ESS is expected to improve the quality and system operation and save about KRW 62 billion from the cost of purchasing electric power each year.



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'BIXPO 2017' Global Electric Power Festival

BIXPO 2017⁹⁾, the largest ever global electric power festival was held at the Kimdaejung Convention Center. More than 3,000 professionals and 268 companies from about 40 countries attended the 3rd BIXPO. More than 70,000 people visited BIXPO this year compared to 50,000 visitors in 2016, and more than 190 business meetings were held between companies around the world to discuss exports worth USD 1.47 billion.



Top 100 Great Work Place 'Trust Management Award'

KEPCO won the Trust Management Award in the public category at the 2017 Great Work Place Award thanks to our efforts to foster respect and trust in our workplace through Happy Work Place, 14 Commandments against Authority, and Lunch Meeting Day. This is the second award we won since 2015.

02

05

2018



Rated 1st Class for Public Organization Anti-corruption Measures Evaluation

KEPCO has achieved the highest rating in the '2017 Anti-Corruption Measures Evaluation' since 2012. The Anti-corruption Measures Evaluation' was introduced by the Anti-Corruption & Civil Rights Commission in 2002 to evaluate the anti-corruption measures of each organization and improve the level of integrity. KEPCO was recognized for its integrity governance operation as it established 'Bitgaram Integrity Cluster' with the resident companies of Bitgaram Innovation City and local governments. In addition, we received the top score in terms of participation in integrity policy and training.

⁴⁾ FR ESS: Frequency Regulation Energy Storage System
⁹⁾ BIXPO: Bitgaram International Exposition of Electric Power Technology



Won the 31st 'CIO 100 Awards' for the Third Consecutive Year

KEPCO won the 'CIO 100 Awards', one of the world's most prestigious awards in the field of technology innovation, for the third consecutive year. Thanks to our policy on building energy platforms that support big data and AI (Artificial Intelligence) integration which are core technologies in the Fourth Industrial Revolution, guidelines for interoperability technology for prevention of redundant systems and a work process based on this.



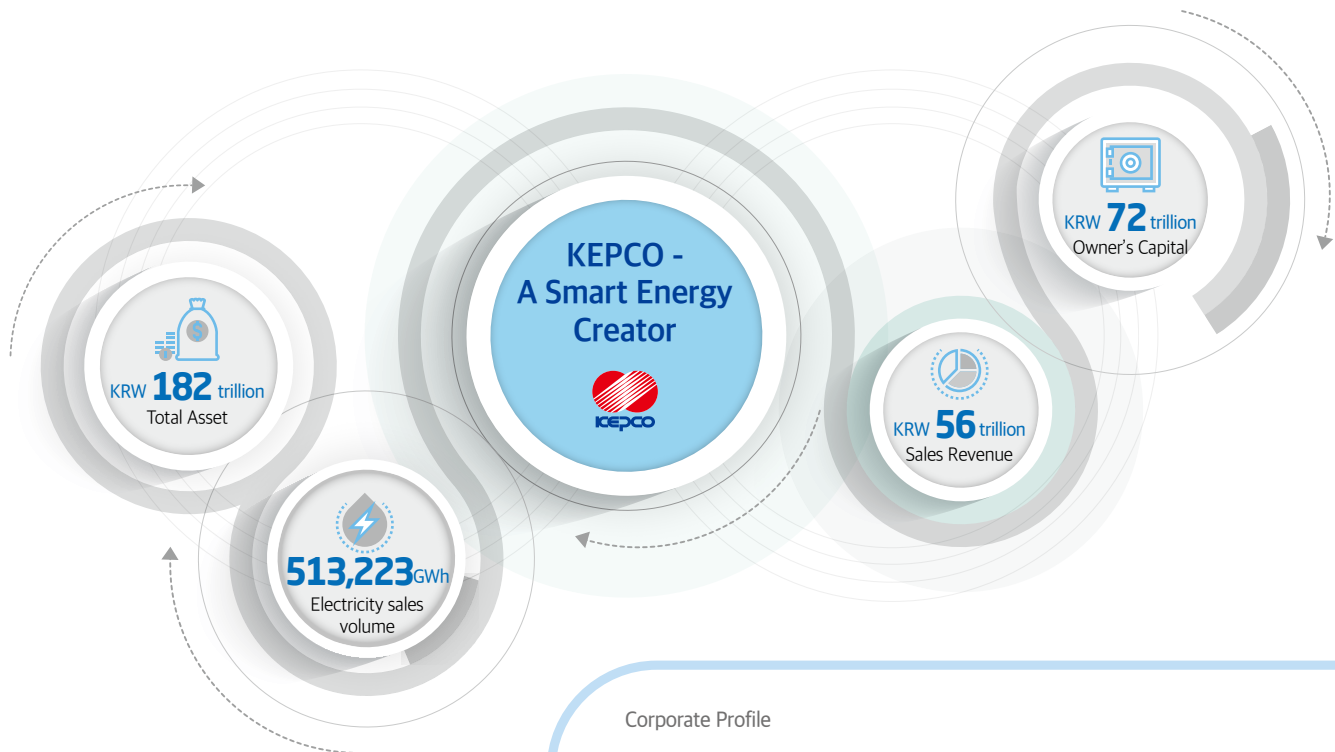
KEPCO Profile

KEPCO - A Smart Energy Creator







KEPCO is a market-based public corporation established for the purpose of promoting the development of electric power sources, stabilizing the supply and demand for electricity, and contributing to the development of the national economy. We focus on providing high-quality electric power and customer service, and gain competitive advantages in the global market while leading the future energy industry through innovation.

As of 2017, we have supplied power to 23 million households nationwide with annual cumulative sales of 513,223GWh. It is divided into 55.7% for industrial use, 21.7% for general use, 13.3% for residential use and 9.3% for other sectors based on contract type.

(As of December 2017, consolidated)

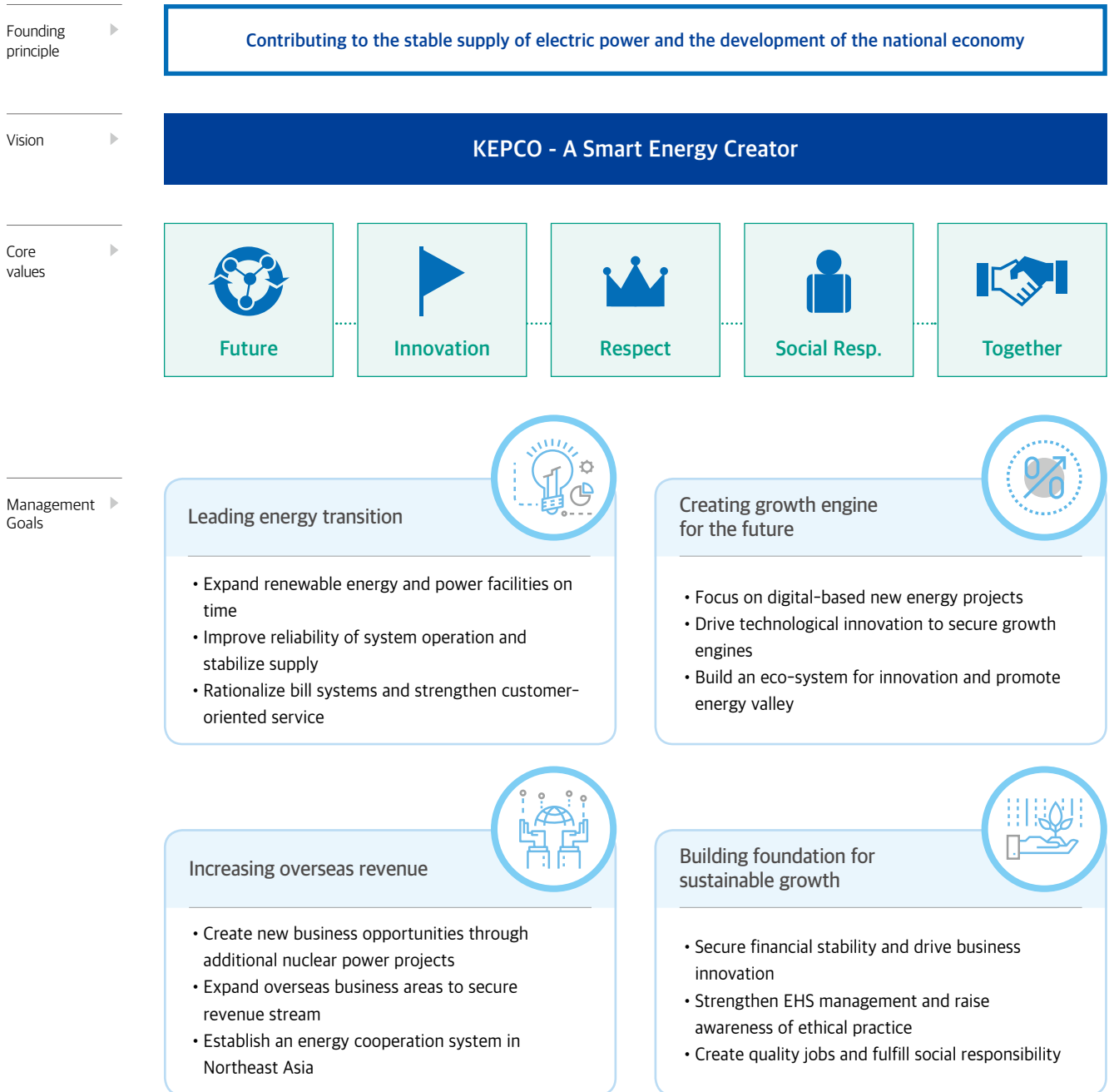


Corporate Profile

	Company Name	Korea Electric Power Corporation
	Date of establishment	January 26, 1898
	Address	55, Jeollyeok-ro, Naju-si, Jeollanam-do, Korea
	CEO	JongKap KIM
	Areas of business	Power resource development, R&D, electric power generation, transmission, substations, distribution and sale, overseas business, etc.
	Number of employees	21,775 (As of August 2018)

Vision & Strategy

In response to the Fourth Industrial Revolution and energy transition, we have defined our role as an innovative 'KEPCO - A Smart Energy Creator' in the global energy industry and are committed to working towards this vision in order to stabilize power supply and contribute to the economic growth of our country.



KEPCO Value Chain

As we move into the era of the Fourth Industrial Revolution where the emphasis is on the importance of intelligence and connectivity, the value chain in the electric power sector is shifting from power generation, transmission, distribution and sales to an integrated business structure that supports convergence between the electric power industry and other industries. In other words, the 'platform-based' system. In response to this change, we are implementing a "Business transformation" based on the new value chain and are building a solid foundation to respond to the era of the Fourth Industrial Revolution.

INPUT

(As of 2017)

Financial Capital

Available assets and capital for production

Total capital (Consolidated)	KRW 72,964,641 million
Total assets (Consolidated)	KRW 181,788,915 million

Human Capital

Capability, experience and focus of human resources

Number of new employees (full-time positions)	1,574 employees
Training cost per employee	KRW 1.21 million

Intellectual Capital

Intangible assets such as brands, patents, know-how, etc.

R&D cost	KRW 433,994 million
Joint R&D project with small and medium-sized companies	KRW 4,281 million

Manufactured Capital

Tangible assets needed for production (e.g. buildings, equipments)

Purchase of electric power	530,932 GWh
Establishment and expansion of electric power facilities	KRW 6,874,290 million

Social Capital

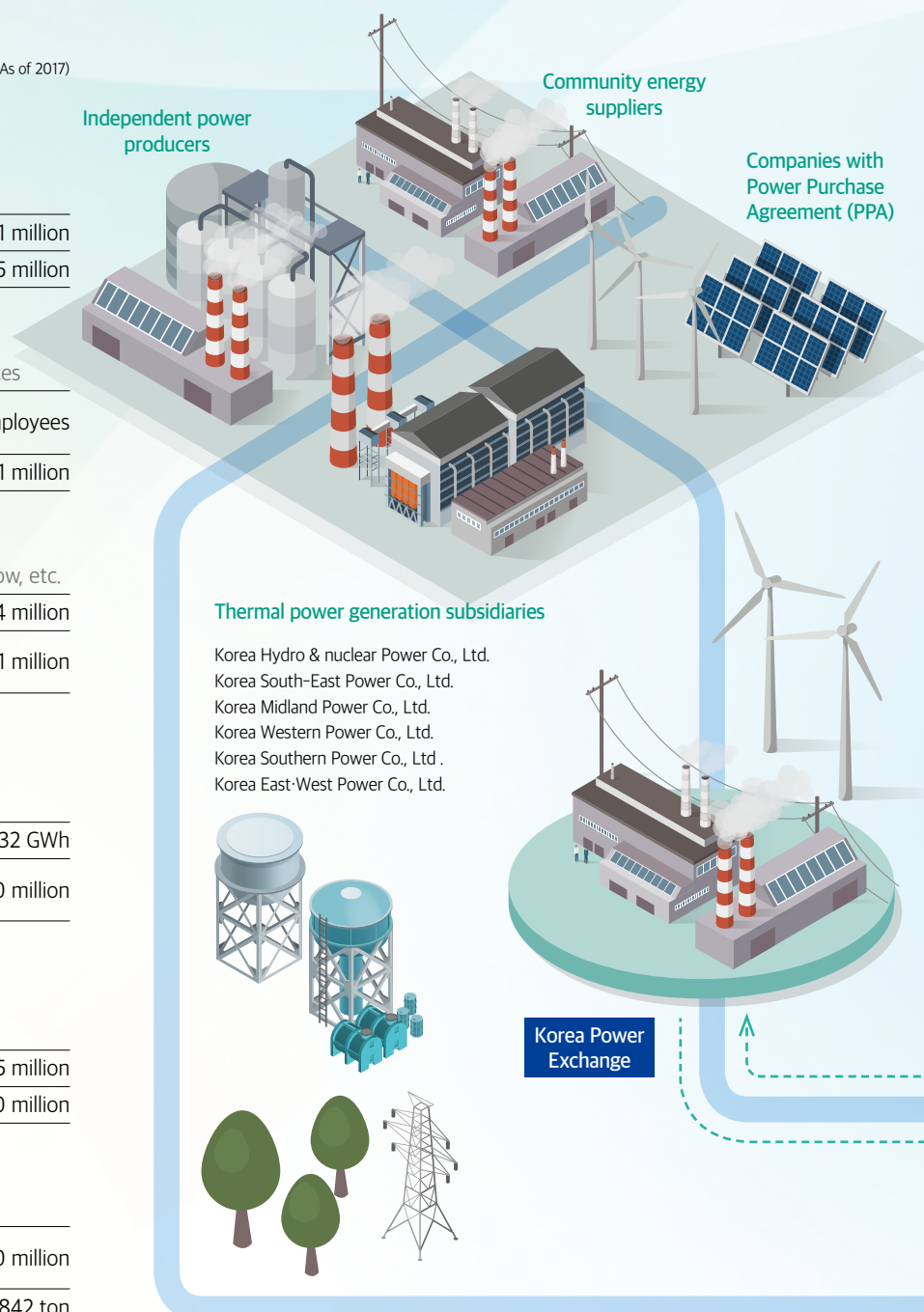
Relationship with stakeholders (e.g. customers, local community, suppliers)

Donation	KRW 28,395 million
Purchase from SMEs	KRW 6,391,600 million

Natural Capital

Resource environment, resource, eco-system, etc.

Investment in environmental facilities	KRW 596,100 million
Consumption of raw materials	262,842 ton



Independent power producers

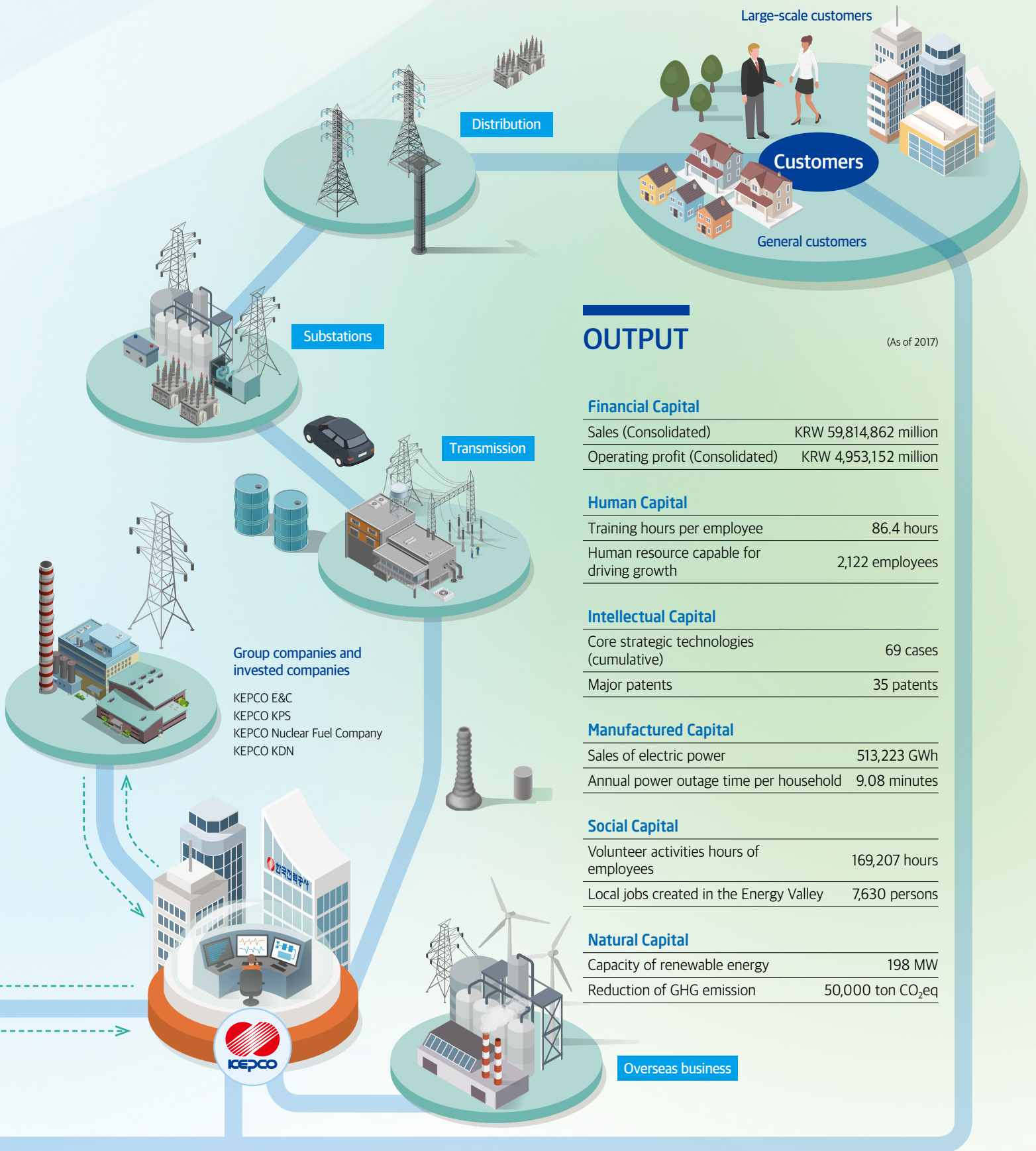
Community energy suppliers

Companies with Power Purchase Agreement (PPA)

Thermal power generation subsidiaries

- Korea Hydro & nuclear Power Co., Ltd.
- Korea South-East Power Co., Ltd.
- Korea Midland Power Co., Ltd.
- Korea Western Power Co., Ltd.
- Korea Southern Power Co., Ltd.
- Korea East-West Power Co., Ltd.

Korea Power Exchange



OUTPUT

(As of 2017)

Financial Capital

Sales (Consolidated)	KRW 59,814,862 million
Operating profit (Consolidated)	KRW 4,953,152 million

Human Capital

Training hours per employee	86.4 hours
Human resource capable for driving growth	2,122 employees

Intellectual Capital

Core strategic technologies (cumulative)	69 cases
Major patents	35 patents

Manufactured Capital

Sales of electric power	513,223 GWh
Annual power outage time per household	9.08 minutes

Social Capital

Volunteer activities hours of employees	169,207 hours
Local jobs created in the Energy Valley	7,630 persons

Natural Capital

Capacity of renewable energy	198 MW
Reduction of GHG emission	50,000 ton CO ₂ eq



Sustainability Management



**Sound
Corporate
Governance**

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**Implementation
of Ethical
Management**

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**Strengthening
Risk
Management**

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**Stakeholder
Engagement
and
Communication**

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**Materiality
Test**

p.24



KEPCO will make a better future with all its stakeholders.
Based on trust, we will communicate closer and create a convenient energy world
and open up a brighter future.

Sound Corporate Governance

BoD Operation

Composition of the BoD

KEPCO's Board of Directors (BoD) is composed of seven executive directors (standing), including the CEO, and eight non-executive directors (non-standing). Non-executive directors are nominated based on their business experience and expertise to make sure that they can respond to the changing business environment in a flexible and professional manner. The Chairman of the Board is selected from the non-executive directors to ensure fair and transparent operation.

Status of the BoD

(As of August 2018)

Classification		Name	Tenure	Expertise & Experience
Standing Directors (Executive Directors)	President & CEO	JongKap KIM	3 years (2018-2021)	Energy and Electricity
	Controller & Auditor General	JungHee LEE	2 years (2018-2020)	Law
	Executive Vice President of Management Support	HoeChen KIM	2 years (2018-2020)	Energy and Electricity
	Executive Vice President of Business	DongSub KIM	2 years (2018-2020)	Energy and Electricity
	Executive Vice President & Chief Strategy Officer	HyungDuck PARK	2 years (2018-2020)	Energy and Electricity
	General Manager of Nuclear Power Business	HyunSeung LIM	2 years (2018-2020)	Energy and Electricity
	General Manager of Power Grid	BongSoo MOON	2 years (2017-2019)	Energy and Electricity
Non-standing Directors (Non-executive Directors)		JiHong KIM	2 years (2016-2018)	Economy and Management (Former Professor, KDI School of International Policy and Columbia Business School in the U.S.)
		ChangJun KIM	2 years (2018-2020)	Energy and Electricity (Current Chair of Living Sports Committee, Korean Sport & Olympic Committee, Former Chairman of Korea Electrical Contractors Association and Electrical Committee Member of the Ministry of Trade, Industry and Energy)
		BongRyeol YANG	2 years (2018-2020)	Energy and Academic Research (Former Vice Foreign Minister of Kwangju Institute of Science and Technology, Ambassador of Malaysia, and Consul General of Houston)
		JwaGwan KIM	2 years (2018-2020)	Energy and Environment (Current Professor, Department of Environmental Engineering, Busan Catholic University and Director of Busan Gyeongnam Eco-city Research Institute)
		YeonGil JEONG	2 years (2018-2020)	Energy and New Materials (Current Professor of Department of New Material Engineering, Changwon University and Energy Policy Advisor of the Ministry of Trade, Industry and Energy)
		GeumSeon NOH	2 years (2018-2020)	Finance and Accounting (Current CEO, EOS Partners Former Standing Auditor, National Pension Service)
		SeungGuk CHOI	2 years (2018-2020)	Energy and Renewable (Current Director, Solar and Wind Energy Cooperative Former Secretary General, Green Korea and Co-president, Korea NGO's Energy Network)
		CheolSu PARK	2 years (2018-2020)	Win-win Cooperation (Current Director, Naju Social Economic Network Former Director, Gwangju Jeonnam Happiness Center)

* The chairman of the board remains vacant since ChoongYong AHN (Dec 2014 ~ April 2018), and will be appointed in the future.

Process for Appointment of Directors

Our directors are appointed in accordance with the 'Act on the Operation of Public Organizations' and 'KEPCO Articles of Association'. When appointing the CEO, we nominate candidates through an open nomination process followed by a recommendation by the Executive Nomination Committee, Public Institution Operation Committee, and an annual general meeting (AGM), a request made by the Minister of Trade, Industry and Energy, and appointment by the President for a three-year term. Executive directors are appointed by the CEO after a resolution at an AGM for a two-year term. The Standing Commissioner is recommended by the Executive Nomination Committee, approved by the Public Institution Operation Committee, requested by the Minister of Strategy and Finance, and appointed by the President. Non-executive directors are nominated by the Executive Nomination Committee, approved by the Public Institution Operation Committee, and appointed by the Minister of Strategy and Finance, and serve a two-year term.

Independence of the BoD

At KEPCO, we guarantee the independence of the BoD so that the Board can faithfully perform its role of control and balance. When it comes to the candidates for non-executive directors, we conduct a strict review to ensure that the candidates have no special relationship with the company and have no reasons for disqualification as stipulated in the Commercial Act*. Furthermore, we have established regulations to make sure that non-executive directors constitute a majority of the BoD, thus strengthening their decision-making authority.

Expertise of the BoD

We consider the expertise of our directors in the process of application review in order to ensure that they are fully qualified to serve their roles and fulfill their responsibilities. Even after their appointment, directors take part in training on a regular basis and visit electric power facilities in Korea and other countries to gain insight into our business operation. Additionally, directors are regularly provided with materials on industrial trends and major management issues.

Diversity of the BoD

To maintain diversity and balance in the BoD structure, we diversify the scope of institutions that nominate candidates. We appoint directors based on their experience and knowledge in various fields including law, economy, media, academia, and labor. In particular, the Executive Nomination Committee manages a pool of female executives as part of our efforts to recruit and recommend more female candidates.

Prevention of Conflict of Interest

Directors are not allowed to use business opportunities that can benefit the company for their personal or third-party gains without the approval of the board. Under Articles 397 and 398 of the Commercial Act, we manage and oversee conflicts of interest in our business practice.

Major reasons for disqualification as a non-executive director pursuant to the Commercial Act (Article 382 of the Commercial Act)

- Directors, executive directors, and employees who are engaged in the regular business of the relevant company; or directors, auditors, executive directors, and employees who have engaged in the regular business of the relevant company within the past two years
- The principal, his/her spouse, lineal ascendants, and lineal descendants, in cases where the largest shareholder is a natural person
- Directors, auditors, executive directors, and employees of the corporation, in cases where the largest shareholder is a corporation
- The spouses, lineal ascendants, and lineal descendants of directors, auditors, and executive directors
- The directors, auditors, executive directors, and employees of a parent company or a subsidiary company of the relevant company
- Directors, auditors, executive directors, and employees of a corporation which has a significant interest in the relevant company, such as business relations with the company
- Directors, auditors, executive directors, and employees of another company for which directors, executive directors, and employees of the relevant company serve as directors and executive directors



Sound Corporate Governance

BoD Activities

The BoD deliberates on important matters such as management goals and the budget in accordance with the Articles of Incorporation and the BoD regulations. A director who has a special interest with a BoD agenda item is not permitted to vote on that particular item. The minutes written after the conclusion of BoD meetings are disclosed to stakeholders by posting them on our website except for special matters, such as confidential business information.

There are various institutional mechanisms in place to ensure that BoD activities are carried out smoothly and dynamically, such as an operational performance assessment system, the publication of a 'Monthly Brief' to distribute management information, workshops to reinforce the professionalism of newly appointed non-standing directors, and on-site management support.

2017 BoD Major Resolutions

1 st Meeting on Jan. 19, 2017	<ul style="list-style-type: none"> • Establishment of KEPCO Medical Foundation • Plan for the establishment of ICT Backup Center • Amendment to the Employment Rules, etc.
2 nd Meeting on Feb. 17, 2017	<ul style="list-style-type: none"> • Limit on the compensation of directors in 2017 • The 56th General Meeting of Shareholders • 2016 Annual Audit Report, etc.
3 rd Meeting on Mar. 3, 2017 4 th Meeting on Mar. 17, 2017	<ul style="list-style-type: none"> • Statement of appropriations of retained earnings for FY2016 • Guarantee for the change of the photovoltaic project in Colorado, USA • Composition of the Executive Nomination Committee and review guidelines for the nomination of non-standing directors
5 th Meeting on Apr. 21, 2017	<ul style="list-style-type: none"> • Amendment to the Salary and Welfare Management Regulations • Amendments to the Implementation Rules of the General Supply Terms
6 th Meeting on Jun. 16, 2017 7 th Meeting on Jun. 30, 2017	<ul style="list-style-type: none"> • Establishment of new business sites • Internal and External Audit Report Q1 2017 • 2017-2021 Financial Management Plan, etc.
8 th Meeting on Jul. 21, 2017	<ul style="list-style-type: none"> • Amendment to the Salary and Welfare Management Regulations • Establishment and investment in a local subsidiary for the Renewable Energy Project Phase II in Guam, USA, etc.
9 th Meeting on Aug. 18, 2017	<ul style="list-style-type: none"> • Sponsoring 2018 PyeongChang Winter Olympics • 2018-2022 Mid- to Long-term Business Goal • H1 FY2017 Consolidated Financial Results Report
10 th Meeting on Sep. 15, 2017	<ul style="list-style-type: none"> • 2017 Internal Employee Welfare Financing • Establishment and investment in SPC for Jeju Hanrim Offshore Wind Power Project • Audit Report, etc.
11 th Meeting on Oct. 20, 2017	<ul style="list-style-type: none"> • Amendment to the Salary and Welfare Management Regulations • Investing in the Hapcheon Lake Floating Photovoltaic Project, etc.
12 th Meeting on Nov. 17, 2017	<ul style="list-style-type: none"> • Financing 2017 Rural Community Win-Win Cooperation • Amendment to the New Power Industry Fund Investment Agreement • Payment guarantee for the foreign currency loan for Bylong Australia
13 th Meeting on Dec. 15, 2017 14 th Meeting on Dec. 28, 2017	<ul style="list-style-type: none"> • Closure of shareholder list for special meeting of shareholders • 2018 Budget and R&D Project Plan, etc. • Management Performance Agreement • Composition of the Executive Nomination Committee and review guidelines for the nomination of CEO, etc.

Agendas of BoD **27** cases
Decided agenda

10 cases
Reported agenda

Participation rate in BoD meetings **91.2** %

Operation of BoD Committees

There are Audit Committee, Executive Nomination Committee, and Professional Committee within the BoD to promote participation in the management of non-standing directors and strengthen their role of deliberation. Depending on the roles of each committee, the Audit Committee conducts audits on business and accounting, and reports the results to the BoD. The Executive Nomination Committee reviews and nominates directors while the Professional Committee conducts pre-deliberation on important management issues.

Status of the subcommittees

Name	Roles	Composition	2017 Performance
Audit Committee	- Conduct audit on work and accounting and report to the BoD - Approve the appointment of independent auditor and conduct audit as stipulated by the laws and the Articles of Incorporation	2 Non-standing directors, 1 Standing director	Held 11 times, - 25 cases decided, 14 cases reported
Executive Officer Nomination Committee	- Decision on the nomination process for president, executive audit committee members, and non-executive directors - Review and recommendation of candidates for president, executive audit committee members, and non-executive directors	External committee members appointed by non-standing directors and the BoD	Not held
Professional Committee	- Pre-deliberation of management issues in specific areas	Management (3 non-standing directors)	Held 5 times, 100% participation rate, 20 cases pre-deliberated
		Overseas (2 non-standing directors)	Held 3 times, 100% participation rate, 4 cases pre-deliberated

2017 Audit Committee Meeting Decisions and Reports

- 2017 Annual Audit Plan
- Amendment of Inspection Regulations Enforcement Guidelines
- Amendment to the Employee Code of Conduct and Guidelines
- Audit Report for the General Meeting of Shareholders
- Amendment to the Disciplinary Request Guidelines

Evaluation and Compensation of the BoD

Our CEO establishes a business performance plan (3-year performance goal and indicator implementation plan) based on the management policies and mid-to-long-term business goals and signs an agreement with the government (Minister of Trade, Industry and Energy) on the management goals to be achieved during his or her tenure. Its implementation progress is reviewed by the Performance Appraisal Board for Public Corporations. Executive directors sign a management contract with the CEO on management goals that should be accomplished, and receive incentives based on their performance. They are remunerated under the remuneration limit approved at the AGM. The reappointment of non-executive directors is determined based on performance assessment results. They are also provided with a service allowance based on internal regulations.

Compensation of the BoD

(Unit: KRW 1,000)

Classification	Number of Persons	Total Compensation	Avg. Compensation per Person
Registered Director (excl. Non-executive Directors and Audit Committee Members)	6	1,044,611	174,102
Non-executive Director (excl. Audit Committee Members)	6	180,000	30,000
Audit Committee Member	3	230,126	76,709
Auditor	-	-	-

CEO
Compensation rate

243%

CEO-to-Average Executive Compensation

Implementation of Ethical Management

Management Approach

In order for KEPCO to be sustainable, it is required to implement an ethical management. In particular, as a representative public corporation, it is important to establish ethical management vision and standards and execute related activities in order to gain public trust. KEPCO operates a compliance officer and implements a variety of sympathy practices. At the same time, KEPCO expands the scope of ethical management to employees, suppliers, and local community.




Vision ▶

Develop into a trusted and respected KEPCO with integrity

2017 Goal ▶

Create and promote integrity business ecosystem and workplace culture

Strategy and action plan ▶

 <p>Establish ethics standards to create social values</p> <ul style="list-style-type: none"> • Prohibit abuse of power and present code of conduct • Systemize ethics standards and raise awareness 	 <p>Establish feedback system through participation-based integrity policy</p> <ul style="list-style-type: none"> • Motivate participation and promote integrity mindset through training • Introduce personalized integrity policy and feedback cycle
 <p>Improve systems for anti-corruption practice</p> <ul style="list-style-type: none"> • Collect ideas for anti-corruption practice from all employees • Prevent corruption and change the regulations to raise public awareness 	 <p>Take initiatives for creating integrity ecosystem</p> <ul style="list-style-type: none"> • Organize Integrity Culture Festival to raise awareness in local community • Implement comprehensive integrity policy that applies to suppliers

Establishment of Ethical Standards

At KEPCO, we have set ethics standards to internalize ethical management. In 2017, we established a new policy to prevent abuse of power between employees and a code of conduct to create values for society, and improve our ethical management system as part of our efforts to strengthen the ethics standards.

Complaint-handling and Multi-channel Reporting System

We established various reporting channels including voluntary reporting, corruption and on-site reporting center. In order to protect the identity of the reporters, we have outsourced the service to create a 24-hour anonymous reporting system. In addition, the complaints received through various channels such as telephone and internet are unified into our internal reporting system and KEPCO Ombudsman was established to review the results of complaints in a fair and transparent manner.

Channels for reporting irregularities

Classification	No. of Complaints			Anonymity	Report method	Note
	2015	2016	2017			
Internal/Voluntary Report	5	-	-	Identified/anonymous	Online	Intranet
Irregularity Report Center	72	37	56	Anonymous	Online	Website
On-site Report Center	-	-	1	Anonymous	Reporting postcard	Sealed postcards provided
Anonymous Report System	95	82	52	Anonymous	Online	External consignment
Total	172	119	109			

Implementation of Ethical Practice

We are striving to grow into a global ethical company by building an ethical management system on the company level. In addition, we engage in various activities to raise awareness and create an integrity workplace culture.

Feedback System for Integrity

We have established a feedback system to ensure integrity based on voluntary integrity policy and analysis.



Result of 2017 Anti-Corruption Policy Evaluation by Anti-Corruption & Civil Rights Commission

Improved Integrity & Anti-corruption System

At KEPCO, we are committed to improving our anti-corruption and prevention performance. In 2017, we collected ideas from employees for the improvement of our anti-corruption practice and implemented 21 ideas out of 59. In addition, we established and strengthened our disciplinary measures against sexual harassment, drunk driving, and security breaches in addition to changing our policies on special counseling system and position and job operation standards for circulation. Furthermore, we mandated a report to protect the identity of reporters and prevent retaliatory actions and unfair treatment against reporters.

Spreading Integrity Mindset

In order to raise awareness of our employees in integrity as well as anti-corruption, we introduced the “KEPCO Certification System for Integrity” in 2017 at our regional headquarters where no corruption has occurred for a certain period of time. The Chungbuk Regional Headquarters was selected as the first “KEPCO with Integrity”, and it has further strengthened its awareness of integrity mindset.



BUSINESS CASE

Building Eco-system for Integrity

At KEPCO, we raise awareness of integrity culture in and outside the company by building an ecosystem for integrity with our employees, our integrity partners (suppliers) and citizens.

Spreading Integrity Culture Activities	Key Performance
Held Bitgaram Integrity Culture Festival by organizing Integrity Cluster in Gwangju Jeonnam (June 2017).	Participated in by 15,000 people, 18 organizations from Gwangju, Jeonnam-do and offices of education.
Established 'Voluntary Property Registration System' for senior executive officers.	Senior executive officers declared their commitment for anti-corruption and integrity.
Raised awareness for integrity culture celebrating one-year anniversary of 'Improper Solicitation and Graft Act'.	Carried out simulated violation report training and awareness and behavior analysis, and disclosed violations.
Introduced 'Day of Integrity' and 'Anti-Graft Law Self Evaluation System' on a monthly basis.	Introduced cartoons, essays and books on integrity.
Introduced 'Partner Certification for Integrity Compliance' for suppliers.	Selected and rewarded top 5 suppliers and provided incentives for integrity.

Strengthening Risk Management

Preemptive Risk Management

At KEPCO, we have established a proactive risk management system to manage risks in the course of our business operation. In particular, we are building a foundation for sustainable growth by identifying areas of improvement, focusing corporate-wide resources and establishing a financial and non-financial risk management system.

Financial Risk Management

To take a proactive approach to risk management, we are monitoring corporate-wide financial risks and establishing a response system. Meanwhile, we have expanded the scope of management and increased the expertise of the Financial Improvement Committee¹⁾ to ensure financial stability. In 2017, we included outside experts (professors of business management and finance) in the committee to improve the expertise and reviewed financial issues such as billing system and overseas project strengthening its role as a control tower.

¹⁾ Consisting of two parts and nine areas - Financial Risk Management Part (Market, Charge, Finance, Profit & Loss, Investment Risks) and Debt Reduction Part (Business Restructuring, Asset Sale, Cost Saving, Profit Generation) - working on financial risk response and reviewing debt reduction performance.

Financial Improvement Committee

- Operate at all times (quarterly)
- Risk performance management, response to financial affairs

Financial Crisis Response Committee

- Operate in response to financial crisis
- Implement emergency response measures against financial crisis

Securing Financial Stability

KEPCO organized a 'Financial Risk Emergency Response Committee' to overcome financial crisis caused by increases in purchase cost and slow sales growth and manage risks proactively.

Financial Crisis Response Committee

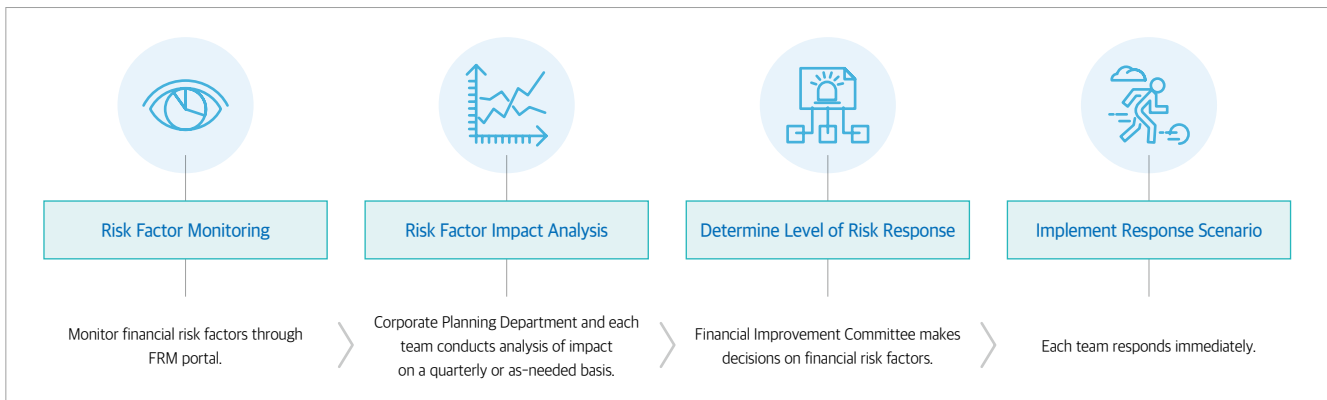
Establish implementation plans for each area (management efficiency, system improvement, business recalibration) and monitor progress on a regular basis

- Organize T/F to focus corporate-wide resources.
 - Strengthen implementation by defining 3 areas and 8 sub-areas and assign roles.
- Establish contingency plans for each crisis situation to expedite the response process.
 - Set to 1-5 stage and implement the system by sales profit level.







Periodical Monitoring of Risk Factors

At KEPCO, we identify and monitor KRI (Key Risk Indicators) including exchange rates, oil prices, bituminous coal prices, SMP, sales decline, revenue cost ratio, debt ratio, and ROA (Return On Asset). Meanwhile, the results of KRI monitoring are shared through the FRM (Financial Risk Management) portal.

Risk Factor Monitoring Process



Response to Risks by Area

Classification	Risk Analysis	Response Improvement Activities by Key Risk Factor
 Market Risk	Purchase cost increased due to changing market conditions (e.g. rising fuel price and policy cost)	<ul style="list-style-type: none"> • Improve market system in relation to environmental cost: RPS¹⁾, stabilize emission cost • Improve generation cost settlement standards: settlement adjustment factor, VC²⁾, etc
 Rate Risk	Rate system needs to be adjusted in response to the government's energy policy	<ul style="list-style-type: none"> • Stabilize industrial rates: take into account supply cost and demand management • Build a foundation for introducing purchase cost coordination: analyze overseas operations, consulting, etc
 Financial Risk	Volatility of financial market increased due to rising interest rate in the U.S. and strong KRW	<ul style="list-style-type: none"> • Strengthen financial management: customize new financial resources, procurement at a fixed rate • Foreign exchange risk management: establish proactive response system, adjust foreign currency finance limit, etc
 Profit & Loss Risk	Profit and loss fluctuates due to oil price and exchange rate	<ul style="list-style-type: none"> • Deal with financial risks by establishing guidelines for managing department account
 Domestic/Overseas Investment Risk	Domestic/overseas investment environment continues to change	<ul style="list-style-type: none"> • Change investment strategies: improve the ROI, review facility plan, etc
 Strategy Risk	Internal and external management environment changes	<ul style="list-style-type: none"> • Present sustainability strategy and policy for innovation and growth

¹⁾ RPS: Renewable Portfolio Standard
²⁾ VC: Vesting Contract

Non-financial Risk Management

Our BCM³⁾ system is designed to respond effectively to disasters such as fires and earthquakes while strengthening our response process at the global level. Since the establishment of the BCM System in October 2016, we have conducted verification of our headquarters and Gwangju Jeonnam Office while planning to expand the system at a corporate-wide level by 2019 through ISO22301 in March 2017.

Meanwhile, we are monitoring risks and sharing the results in real time through our risk management portal and managing risks in advance by dividing risk factors into four areas including Environment, Disaster-interruption, Promotion and Conflict. Furthermore, we have designated teams by risk type and established risk management manuals while responding to identified risks through 5-step process.



△ BCM Certificate

Areas of Risk Management

Areas	Risk Type
Environment	<ul style="list-style-type: none"> • Intensifying climate change • Increasing demand to reduce particulate matter
Disaster and interruption	<ul style="list-style-type: none"> • Interruption of power supply due to power grid failure • Interruption of power supply due to cyber attack • Interruption of power supply and outbreak of infectious disease due to disaster and earthquakes
Promotion	<ul style="list-style-type: none"> • PR activities in response to power crisis • Damage to corporate reputation due to corruption related to employees
Conflict with stakeholders	<ul style="list-style-type: none"> • Civil complaints on transmission and distribution facilities • Interruption of power supply due to labor-management conflict

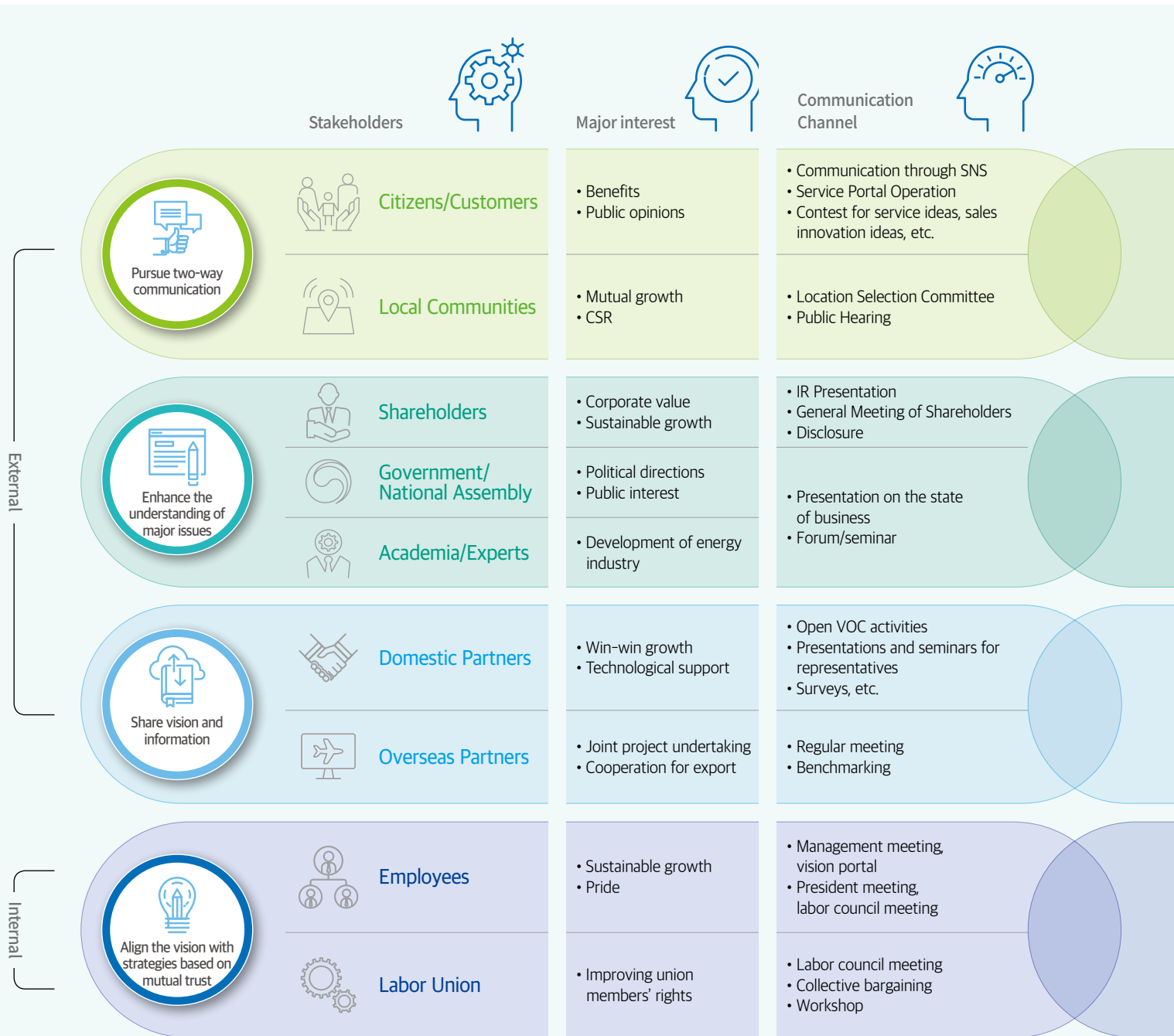
³⁾ BCM: Business Continuity Management

Stakeholder Engagement and Communication

Stakeholder Engagement

At KEPCO, we established 'Stakeholder Engagement Policy' with the aim to protect the rights and interests of our stakeholders and create sustainable values in 2016. We divided our stakeholders into ten groups, including Citizens/Customers, Local Communities, Shareholders, Government/National Assembly, Media, Academia/Experts, Domestic Partners, Overseas Partners, Employees, and Labor Union and maintain effective communication channels based on the areas of interest of each group.

Communication with Stakeholder



Stakeholder Communication

Results of the stakeholder communication are shared with the management through a weekly meeting that is held to share information on pending issues with the management. Also, they are reported to the BoD every quarter to continually monitor the issue resolution status and reflect feedback. For issues that have top-level importance and urgency in relation to the electric power business, such as the construction of a power transmission facility and electricity supply & demand crisis in summer and winter, the CEO makes field visits to share opinions with stakeholders on pending issues. By doing so, we are setting ways to resolve issues through cooperation.

Directions to share core values



Communication and Response



Identify and reflect needs on time to build a foundation for business

Establish a system to handle complaints and conflict, and to promote participation for local private and related organizations

Share information proactively and manage market sentiment

Build a foundation for support, policy and legislation environment

Form consensus on 'changes in industry' and create positive relationships

Create shared economy ecosystem by sharing information and cooperating

Strengthen competitive advantages and human resource network

Align vision and management strategy based on mutual trust between labor and management

Promote communication based on mutual trust

- Collected and developed ideas for service innovation
 - Ideas on service (343 ideas) and sales innovation (619 ideas)
- Identified the underprivileged in energy welfare through metermen and call center

- Developed a new model for communication and conflict resolution (e.g. residents' participation in selection of location)
- Established a life cycle conflict management system from prevention to follow-up
- Conducted survey on the acceptance to power facilities for policy making from the customers' perspective

- Organized on-site IR for key shareholders

- Responded to government's management assessment and audit on public affairs

- Organized Electricity Journal Demand Forum (reporters specializing in energy sector)
- Organized the Review Committee for Transition of Terms and Council of Labor-Management Experts
- Held a seminar with outside experts on the introduction of the power purchase cost coordination system

- Collected feedback from SMEs and selected improvement measures
- Developed relocation support system in cooperation with Energy Valley and local governments

- Organized Global Mutual Growth Expo
- Held BIXPO 2017 (Bitgaram International Expo of Electric Power Technology) - Provided consultation for export (USD 1.47 billion) and signed export contract (USD 11.26 million)

- Conducted surveys on awareness of vision and employee satisfaction
- Established online forum on the intranet
- Organized an on-site seminar (e.g. business sites damaged by earthquake)
- Held the female leadership workshop 'Take a CHANCE'

- Labor Council Meeting: Headquarters and 21 first-tier business sites
- Labor Meeting: 230 second-tier business sites

Materiality Test

Materiality Test and Topic Selection

At KEPCO, we identify material topics through internal and external stakeholder surveys, international standards analysis, benchmarking of the electrical power industry, and media research to ensure sustainable practice. We report the activities, performance, and plan for the future with a focus on material topics identified through in-depth analysis.



Step 1

Creating a Pool of Topics

Based on the economic, environmental, and social impacts on our overall business operation and stakeholders' decision-making, we create a pool of 34 topics through international standards analysis, global benchmarking, internal data, stakeholder interviews, and media research.



Step 2

Prioritizing Topics

In order to prioritize a potential pool of topics, we carry out surveys among our customers, employees, and suppliers. Based on the results as well as business impact and stakeholders' interest, we identify the level of sustainability in our practice and conduct a materiality test.

Stakeholder Survey Overview

- Date: Wednesday, May 23 - Tuesday, May 29, 2018
- Respondents: customers, employees, suppliers, local community, sustainability experts, etc.
- Results: 1,560 people responded to the survey



Step 3

Materiality Test

Business Impacts

- Review of internal materials including strategy, newsletters, documents, etc.
- Use the result of benchmarking in the power and energy industries: Identify common issues in the industry including response to climate change, strengthening safety and health, development of renewable energy, R&D innovation, minimizing environmental impact
- Review of UN Global Compact, GRI Standards, DJSI, and ISO26000 supported by the company

Stakeholders' Interests

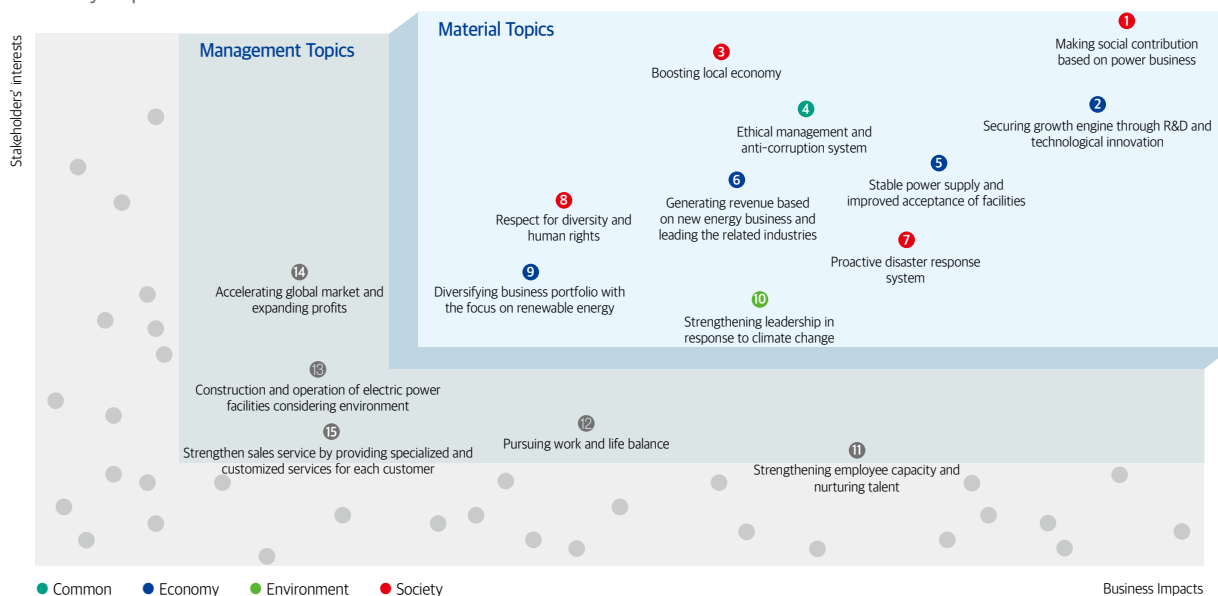
- Use the surveys among key stakeholders including customers, suppliers, local community, NGO, shareholders, and government
- Use the result of 4,667 Media article analysis: Mostly articles such as 'Promotion of Social Contribution by Electric Power Industry', 'Acceleration of Expansion into the World Market and Expansion of Revenue', and 'Building a Win-win Growth Ecosystem'



Selection of Topics and Report

Based on the economic, environmental and social indicators defined by the GRI Standards, we identified 10 material topics which were rated 'High'. The material topics were selected in accordance with their significance, scope, aspects, boundaries, reporting period and limit. In addition, the topic boundary was set in consideration of the scope of organizational impact, survey results, due diligence on human rights, and value chain.

Materiality Map



No	Material Topics	GRI Topic	Areas of Impact	Page
1	Making social contribution based on power business	GRI 413: Local Community	<input type="checkbox"/> Finance <input type="checkbox"/> Operation <input checked="" type="checkbox"/> Reputation	p.67
2	Securing growth engine through R&D and technological innovation	EU 8: Research and Development	<input type="checkbox"/> Finance <input checked="" type="checkbox"/> Operation <input type="checkbox"/> Reputation	p.32, 33
3	Boosting local economy (e.g. successful completion of Energy Valley)	GRI 203: Indirect Economic Impacts GRI 204: Purchasing practices	<input type="checkbox"/> Finance <input checked="" type="checkbox"/> Operation <input type="checkbox"/> Reputation	p.69
4	Ethical management and anti-corruption system	GRI 205: Anti-corruption	<input type="checkbox"/> Finance <input type="checkbox"/> Operation <input checked="" type="checkbox"/> Reputation	p.18, 19
5	Stable power supply and improved acceptance of facilities	EU 23: Access EU 24: Provision of Information	<input type="checkbox"/> Finance <input checked="" type="checkbox"/> Operation <input type="checkbox"/> Reputation	p.35, 36, 59
6	Generating revenue based on new energy business and leading the related industries	-	<input checked="" type="checkbox"/> Finance <input type="checkbox"/> Operation <input type="checkbox"/> Reputation	p.29~32
7	Proactive disaster response system	GRI 403: Occupational Health and Safety EU 16, 18: Employment	<input type="checkbox"/> Finance <input type="checkbox"/> Operation <input checked="" type="checkbox"/> Reputation	p.54, 55, 83
8	Respect for diversity and human rights	GRI 412: Human Rights Assessment	<input type="checkbox"/> Finance <input type="checkbox"/> Operation <input checked="" type="checkbox"/> Reputation	p.56, 57
9	Diversifying business portfolio with the focus on renewable energy	GRI 203: Indirect Economic Impacts	<input checked="" type="checkbox"/> Finance <input type="checkbox"/> Operation <input type="checkbox"/> Reputation	p.47
10	Strengthening leadership in response to climate change	GRI 305: Emission EU 5: Organizational profile	<input type="checkbox"/> Finance <input checked="" type="checkbox"/> Operation <input type="checkbox"/> Reputation	p.43, 81



Sustainability Topics



Topic 1.

Creating
**New Energy
Ecosystem**

p.28

Topic 2.

Strengthening
**Energy Market
Leadership**

p.34

Topic 3.

Responding to
**Climate
Change**

p.42



Topic 4.

Creating
Employee-friendly
**Workplace
Culture**

p.48



Topic 5.

Leading the
Realization of
Social Value

p.58



KEPCO has selected material topics for sustainability management and is actively implementing related activities.

Topic 1

Creating New Energy Ecosystem

Management Approach

As energy transition and the Fourth Industrial Revolution emerge as part of the global agenda, our role as an electrical power corporation has become more important than ever. At KEPCO, we are building a foundation for Digital Utility based on innovative technology and new convergence energy industries. We are leading the new paradigm of the Fourth Industrial Revolution by accelerating the development of digital business model and technology.

Risk

- Change of power generation, transmission/distribution and sales structure to platform-based system (diversified competitions)
- Acceleration of digitization and technological innovation of Fourth Industrial Revolution in AI and IoT of the energy sectors

Opportunity

- Extensive experience in the new energy industries (e.g. renewable energy, ESS, smart grid)
- Increased government support in the new industries (e.g. innovation area)
- Dramatic growth of new technology-based market (e.g. AI, IoT)

Key Performance

Annual R&D project cost



KRW **433,994** million

Built the world's largest frequency regulation ESS



376 MW

AMIs



At **5.2** million households (accu.)

Building Digital Utility System

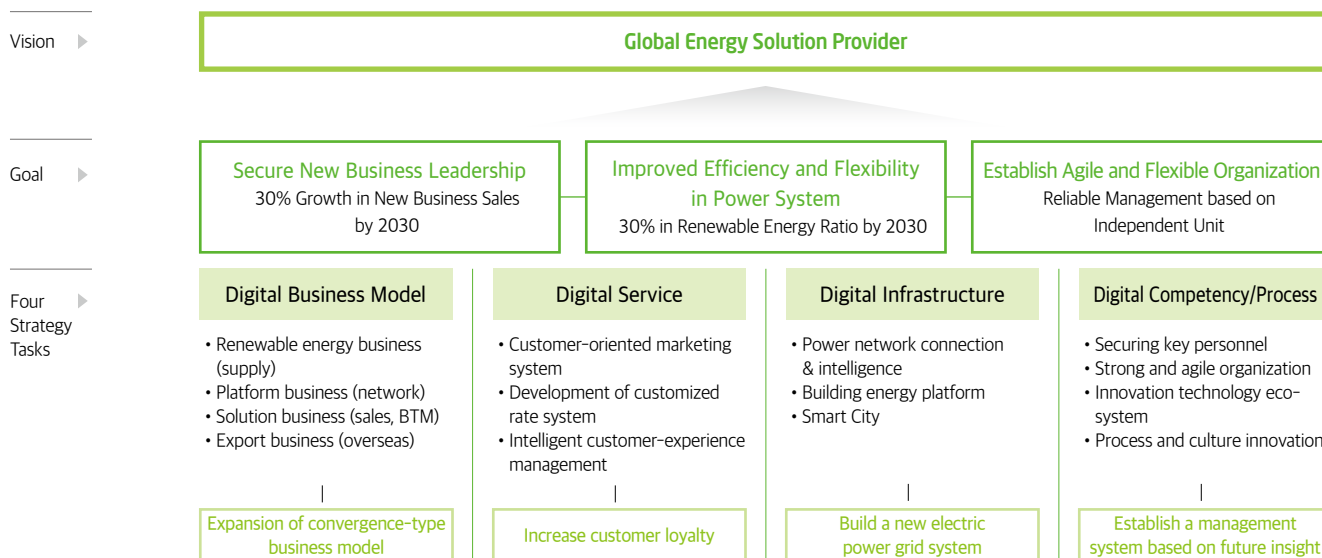
Digital KEPCO for the Future

In pursuit of digital transformation in our business area, infrastructure, service and overall process based on energy solution and platform, we are transforming ourselves as 'Digital KEPCO' in response to the emergence of disruptive technological innovation and the Fourth Industrial Revolution in order to drive our nation's economic growth. To this end, we have established the concept of 'KEPCO 4.0' as the digital utility that leads to the Fourth Industrial Revolution and defined the vision for digital revolution. Through this, we will take a proactive approach to the changing market environment and gain competitive advantages in the global market through technological innovation and enhancement of business competency.

Organizational Operation for KEPCO 4.0

To lead the Fourth Industrial Revolution in the electric power sectors, we established 'Digital Transformation Office' and are implementing Digital KEPCO Strategies. Based this organization, we are carrying out the establishment and coordination of the Fourth Industrial Revolution Policies in the power energy sector while improving the legal system, responding to foreign policies, developing ICT convergence business model, and operating the 7 core technology pilot projects and Big Alliance. We are also working on our response to industrial transportation through corporate-wide coordination and 'Future Innovation T/F' based on bottom-up communication.

Digital Transformation Strategy



BUSINESS CASE

KEPCO 4.0 Roadmap

We established digital-based energy platform roadmap and are implementing strategies.



Development of Digital Business Model

Clean and Smart Infrastructure

Building Battery-Charging Infrastructure for Electric Vehicles

Since 2009, we have contributed to the distribution of electric vehicles by building charging stations. Since 2016, we have built various types of charging stations in connection with shopping malls and residential areas. In 2017, we installed 500 public quick chargers in supermarkets and train stations while actively engaging in electric vehicle charging programs in apartments nationwide. We built a foundation for commercialization through payment service and open charging infrastructure and will add 3,000 quick chargers by 2022.

Building the AMI¹⁾ Distribution Project

By building AMI, we can improve the accuracy of our demand forecast and efficiency in load management through real-time power consumption and time-based charge information to customers. As of the end of December 2017, we had installed AMI for approximately 5.2 million households and expect to install AMI for all 22.5 million households. In addition, we will continue to expand intelligent services based on AMI, such as peak load reduction through demand response through transformer load management and voltage monitoring, and improvement of electricity quality for suppliers.

ESS²⁾ Project

ESS, which stores electric power and supplies it when needed, can be utilized in various fields such as demand management, expansion of renewable energy, improvement of electric quality, and frequency regulation.

In particular, frequency regulation ESS is able to stabilize generator output and greatly reduce annual cost by replacing the frequency reserve power of the existing coal generator with the ESS. We succeeded in commercial operation of 376MW frequency regulation ESS, the largest capacity in the world, contributing to the total ESS exports of KRW1.2 trillion by Korean companies in 2014-2017. We plan to build the ecosystem for the ESS industry by expanding the scope of its application to stabilize renewable energy output and peak reduction while driving export of frequency regulation ESS based on our experience in the domestic market.

Smart Grid Project

The Smart Grid is a next-generation power grid that provides high-quality power services by optimizing and upgrading the power grid through convergence of power and ICT technologies while maximizing energy efficiency. From 2009 to 2013, we joined the project in five key areas including transmission/distribution, consumer, transportation, renewable energy and electrical power service within the Jeju Smart Grid Demonstration Complex, developed business models and successfully completed the standardization process. Based on the technology and experience we gained from the project, we formed a consortium to promote the participation in government-funded 'Smart Grid Diffusion Project' with business models such as AMI-based power service and energy consulting service. The business model will be developed based on the needs of each region with local governments by 2018.

¹⁾ AMI: Advanced Metering Infrastructure

²⁾ ESS: Energy Storage System



BUSINESS CASE

We are acquiring talents to lead the Fourth Industrial Revolution using the GTA (Global Target Acquisition) Tool.

Acquisition of Global Talents

Development of recruitment tool

- Introduce recruitment process specializing in selection of talents
- Target recruiting talents with strong job performance

Global Target Recruiting

- Organize a job presentation in the U.S. for the first time for public corporations
- Research overseas HR market and build a network for recruitment

Building a pool of talents

- Build a pool of talents specializing in rare languages and data science, etc.



Energy Efficiency

Improving Energy Efficiency through ESCO³⁾

At KEPCO, we are committed to distributing high-efficiency facilities and improving energy efficiency. In June 2016, we established an independent corporation and invested KRW 150 billion in the ESCO project. In 2017, we signed an MOU with Samsung Electronics for the development of a peak management pilot project and energy IoT (Internet of Things) joint project.

Distribution of K-EMS⁴⁾

As of 2017, we installed K-EMS (KEPCO-Energy Management System) in 120 offices, which was recognized for its technological excellence by the ISGAN and GSGF in 2015. In addition, we carried out K-EMS-based energy efficiency projects in 21 locations including buildings, production facilities and universities in the private sector such as the Presbyterian University and Theological Seminary. By 2026, we will install an additional 2,000 K-EMS to lead the expansion of energy efficiency market.

Smart City

At KEPCO, we are establishing and promoting a smart city development model with a focus on energy. In 2018, we are building a foundation for new growth engines in line with the government's smart city development strategy and nationwide development based on the energy model demonstration of Naju Bitgaram Innovation City.

Big Data and IoT

Big Data

In September 2016, we established 'Power Big Data Center' to promote public information about electrical power in the private sector and new energy industries. The center provides 10 Power Statistics including 'power usage by contract type' and 6 Power Information Analysis Reports including 'national power usage trend over 10 years'. In addition, 129 items of data such as 'daily demand forecast' are provided.

In 2017, we established a procedure to provide power data outside the company and provide customized data upon request by the private sector. We plan to create an ecosystem for mutual growth in the energy industries through the participation of various businesses and consumers based on digital energy platforms, such as data standardization, quality improvement, and enhancement of data capacity.

IoT

At KEPCO, we are developing a comprehensive management system using IoT (Internet of Things) to build a smart access control system, power facility surveillance and social safety net service. We are leading the 'Energy Internet' project by installing IoT terminals and sensors in Jeonju (9 million units), and nationwide IoT infrastructure development for collecting power data.

³⁾ ESCO: Energy Service Company

⁴⁾ K-EMS: KEPCO Energy Management System



Acquisition and Development of Talents for New Energy Business

We are developing human resources to expedite the commercialization of 10 Strategic Growth Engine Technologies to take initiatives in new energy business. As a result, we trained 888 people through 103 programs and will continue our talent development programs in line with mid- to long-term strategies.

Building and Operating Mid-to-Long-term HR Development System

Training System

- Step 1. New Business Basic/Entry Level (27 Programs): SG, big data, Basic Superconductivity, Understanding Power Market, etc.
- Step 2. New Business Practice (41 Programs): Smart City, HVDC, Superconductivity Technology, Renewable Energy, etc.
- Step 3. New Business Advanced (35 Programs): ESS, big data Expert, R&D Expert, etc.

HR Development

- New Business Expert (429 employees): HR Development for Energy Efficiency (e.g. New Business Model, HVDC)
- Policy Expert (192 employees): New Market Design Expertise (e.g. Energy Policy, Renewable PPA)
- Strategic Technology R&D Expert (267 employees): Convergence Technology Expertise (e.g. Offshore Wind Power, New Transmission Technology)

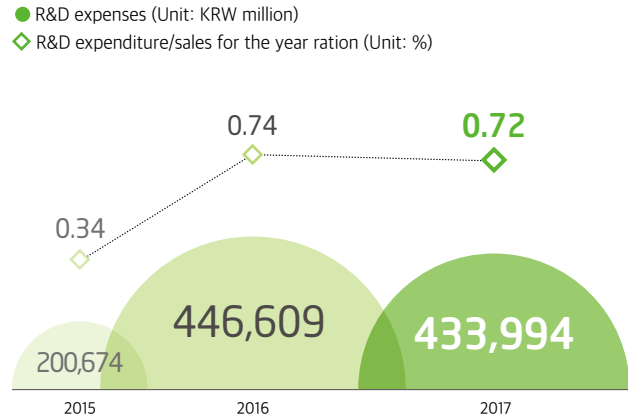
Forming New Energy Industry Fund

At KEPCO, we raised KRW 500 billion for New Power Industry Fund for power venture startups, new industrial development, and overseas projects in 2016 to promote the development of new energy industries and create an ecosystem for sustainable growth. In addition, we operated a sub-fund of KRW 156.5 billion to support venture startups and small and medium-sized companies as part of our digital infrastructure and new project development strategy.

Development of Core Technologies

In response to the 10 Core Strategic Technologies and the Fourth Industrial Revolution, we developed the KEPCO 4.0 Core Technology as a new growth engine for the future. We will continue to acquire core technologies and strengthen our competitive advantages in the global market through R&D investment.

R&D expenses and R&D/sales for the year ratio



10 Core Strategic Technologies

Fourth Industrial Revolution	Energy Platform	Common platform and interoperability	Renewable Energy	Grid-ESS	Development of ESS operation technology and secondary battery
	Smart Energy City	Smart city operation platform		Next-generation Wind Power	GW-grade offshore wind power complex
	Digital Power Plant	Facility analysis and failure forecast		High Efficiency Solar Energy	Photovoltaic resource analysis and complex design
Transformation of Power Grid	Super Grid	International grid-connected technology	Response to Climate Change	Carbon Capture and Resourcification	Post-combustion CO ₂ capture and resourcification
	Active Distribution Grid	Next-generation intelligent distribution power grid		Clean Convergence Power Generation	IGSS/IGFC ¹⁾ power generation

* Rolling out the core strategic technology roadmap in line with business environment and technology trends

¹⁾ IGSS : Integrated Gasification Combined Cycle IGFC: Integrated Gasification Fuel Cell Cycle

Major technologies of KEPCO 4.0





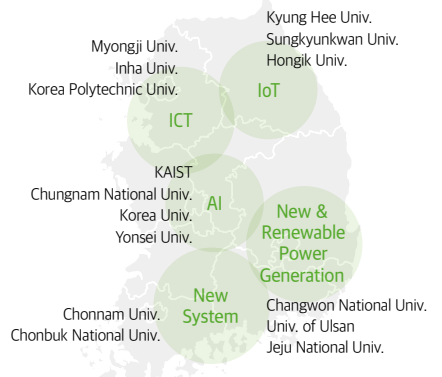
Development of core technologies	Sensor	IoT	Cloud	Big data	AI	Robot
Strategies to secure technologies	<ul style="list-style-type: none"> Develop 33 sensors for power generation, transmission, substations, and distribution Develop the energy harvesting technology to secure sources for the sensors 	<ul style="list-style-type: none"> Acquire the international standard for the in-house developed protocol Build infrastructure for IoT 	<ul style="list-style-type: none"> Transform the entire work process into a cloud system Identify new business models base on the cloud 	<ul style="list-style-type: none"> Establish a KEPCO big data platform Build infrastructure to store and analyze big data 	<ul style="list-style-type: none"> Develop basic AI technologies including status diagnostics Develop AI machine learning technologies 	<ul style="list-style-type: none"> Develop unmanned robots and drones to monitor and inspect electric power facilities Become the first public corporation to develop AI-based chatbots

BUSINESS STORY

Promoting Open Innovation for Digital Transformation

Open and Cooperative R&D

At KEPCO, we are focusing on strengthening our R&D portfolio through open innovation and R&D promotion using collective intelligence to secure core technologies and respond to technological innovation such as industrial convergence in the era of the Fourth Industrial Revolution. We are creating synergistic effect through technological partnership in the renewable energy and convergence sectors and securing growth engines for the future.

<p>Internal Research Projects</p> 	<ul style="list-style-type: none"> Development of 10 Core Strategic Technologies based on external expertise: Energy platform, Active distribution, Grid-ESS, etc. 						
<p>Open R&D → Acquisition of Open/Convergence-based Leading Technology</p> 	<ul style="list-style-type: none"> Strengthened the implementation system (e.g. Task Planning Committee operation and establishment of procedures). Organized teams for open R&D performance for ongoing research management. <table border="1" data-bbox="561 1034 1371 1218"> <thead> <tr> <th data-bbox="569 1045 834 1088">Task 1</th> <th data-bbox="834 1045 1106 1088">Task 2</th> <th data-bbox="1106 1045 1362 1088">Task 3</th> </tr> </thead> <tbody> <tr> <td data-bbox="569 1088 834 1218"> <ul style="list-style-type: none"> Development of sea water unit cell Recycling photovoltaic modules </td> <td data-bbox="834 1088 1106 1218"> <ul style="list-style-type: none"> Manufacturing polyurethane based on CO₂ Substation monitoring and inspection robot, etc. </td> <td data-bbox="1106 1088 1362 1218"> <ul style="list-style-type: none"> Spatial cognitive power zone inspection drone Remote wireless power transmission, etc. </td> </tr> </tbody> </table>	Task 1	Task 2	Task 3	<ul style="list-style-type: none"> Development of sea water unit cell Recycling photovoltaic modules 	<ul style="list-style-type: none"> Manufacturing polyurethane based on CO₂ Substation monitoring and inspection robot, etc. 	<ul style="list-style-type: none"> Spatial cognitive power zone inspection drone Remote wireless power transmission, etc.
Task 1	Task 2	Task 3					
<ul style="list-style-type: none"> Development of sea water unit cell Recycling photovoltaic modules 	<ul style="list-style-type: none"> Manufacturing polyurethane based on CO₂ Substation monitoring and inspection robot, etc. 	<ul style="list-style-type: none"> Spatial cognitive power zone inspection drone Remote wireless power transmission, etc. 					
<p>International Joint Research → Global Leading Technology Catch-Up</p> 	<ul style="list-style-type: none"> Signed R&D MOU with leading overseas organizations and secured a global R&D base (EPRI, etc). Standardized the process for R&D projects, scope, contract signing and distribution of profit. <table border="1" data-bbox="561 1336 1371 1476"> <thead> <tr> <th data-bbox="569 1347 834 1390">Fraunhofer (Germany)</th> <th data-bbox="834 1347 1106 1390">EPRI (US)</th> <th data-bbox="1106 1347 1362 1390">ARM (UK)</th> </tr> </thead> <tbody> <tr> <td data-bbox="569 1390 834 1476"> <ul style="list-style-type: none"> Leading technologies in renewable energy sectors Ceramic high-temperature sensor, etc. </td> <td data-bbox="834 1390 1106 1476"> <ul style="list-style-type: none"> Technological innovation for power generation and transmission/distribution Operational efficiency technology </td> <td data-bbox="1106 1390 1362 1476"> <ul style="list-style-type: none"> Smart Meter Gateway-based open AMI service platform </td> </tr> </tbody> </table>	Fraunhofer (Germany)	EPRI (US)	ARM (UK)	<ul style="list-style-type: none"> Leading technologies in renewable energy sectors Ceramic high-temperature sensor, etc. 	<ul style="list-style-type: none"> Technological innovation for power generation and transmission/distribution Operational efficiency technology 	<ul style="list-style-type: none"> Smart Meter Gateway-based open AMI service platform
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<p>Energy Based Universities → Acquisition of Core Resource Technologies</p> 	<ul style="list-style-type: none"> Built a cluster of energy base universities to promote basic research (e.g. Fourth Industrial Technologies) Improved the quality of technology based on intensive research on specific basic technology group Selected 24 universities in 5 regions 						

Topic 2

Strengthening Energy Market Leadership

Management Approach

At KEPCO, we are committed to gaining competitive advantages for our fundamental business model which is supplying electric power and securing growth engines for the future by expanding our presence in the global market. We will continue to strengthen our leadership in the global energy market by creating sustainable values.

Risk

- Increase in uncertainty of our business operation due to volatile oil prices and changes in the international situation
- Emergence of new competition due to the breakdown of industry boundaries
- Increase in possibility of supply crisis due to natural disasters and cyber-terrorism

Opportunity

- Stabilize power supply based on innovative systems and technologies in the era of the Fourth Industrial Revolution
- Expand global market and increase business opportunities based on strong new project reference
- Enhance cyber security and safety management by taking advantage of new technologies

Key Performance

Annual power outage time per household



9.08 minutes

Transmission/distribution loss rate



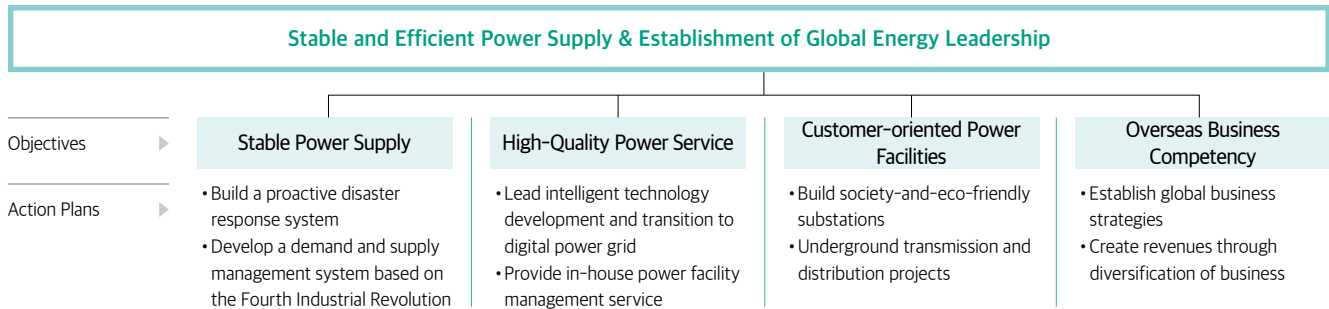
3.57 %

Overseas power capacity (Based on shareholding ratio)



8,388 MW

Stable Power Supply



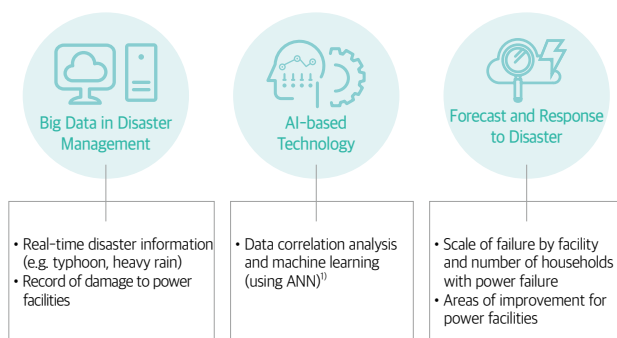
System of achieving supply target

At KEPCO, we establish annual business goals and detailed plans to stabilize power supply and improve service for 22.94 million households. In addition to supplying high-quality electricity through efficiency power management using cutting-edge analysis systems, we managed to simplify the electricity request process and reduce supply time as part of service experience innovation. At KEPCO, we will establish a dedicated team of specialists for service specialization in each regional office and improve our billing system in order to provide customer-oriented sales and charge systems and supply power in a more stable and efficient manner.

Proactive Disaster Response System

At KEPCO, we take a proactive approach in our disaster response system to increase safety in our power facilities. In order to minimize damage to our facilities and expedite the response process, we introduced ICT-based technology (e.g. big data, artificial intelligence) in our disaster damage forecast system in 2017. As part of our efforts to improve the response to disaster caused by climate change, we established climate change policies with an aim to implement them by 2020. In addition, we expanded the regional Disaster Control Center and established comprehensive measures to prevent damage caused by earthquakes and supply power in a stable manner. Furthermore, we expanded our global standard BCM (Business Continuity Management) to strengthen our corporate-wide response to disasters.

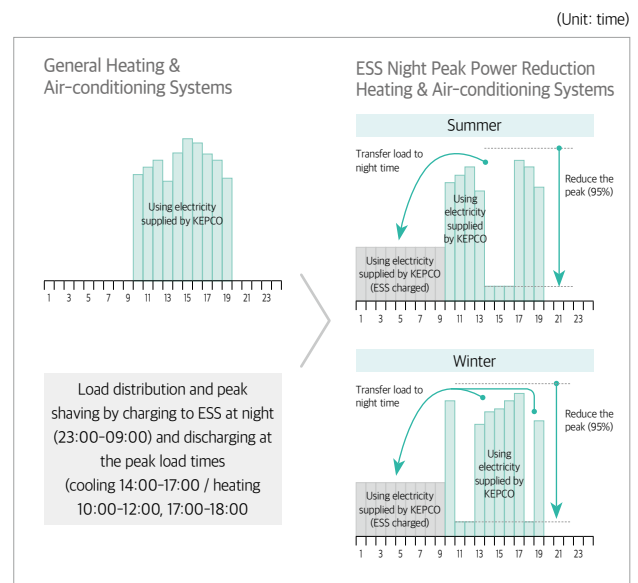
ICT-based Disaster Damage Forecast System



¹⁾ ANN: Artificial Neural Network

Development of Fourth Industrial Revolution Technology-based SMART Demand Management System

At KEPCO, we applied smart technology and intelligence in our demand management system based on new energy technology for more stable demand management. In 2017, we developed the IoT-based 'ESS Night Peak Power Reduction Air Conditioning Systems' and are planning to distribute 12,000 ESS-based air-conditioning facilities by 2022 to create 236MW power peak shaving effect. We are also developing new overseas markets through demand management and operation techniques based on the know-how we have gained over the years.

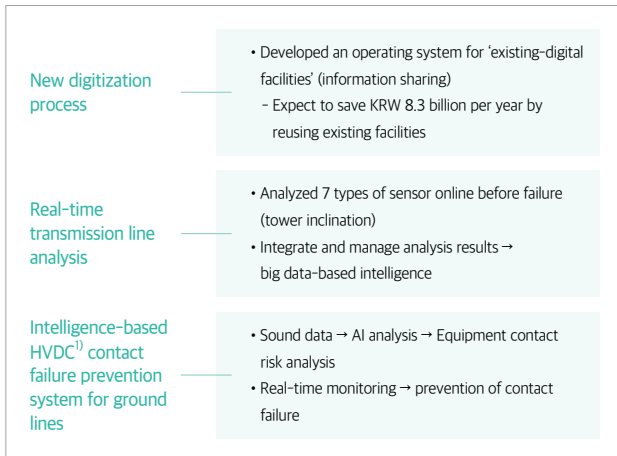


High-quality Power Service

Leading Intelligent Technology and Digitization of Power Grid

To meet the expectations of the citizens, we are expanding our supply of high-quality power based on power service. In October 2017, we built a test-bed with real-time analysis based on big data to analyze the transmission/distribution lines and manage results. By doing so, we changed the system to support online analysis of 7 types of sensors including tower inclination to expedite the process of taking prevention measures. Furthermore, in December, we developed a new process for a digitization and intelligence-based HVDC contact failure prevention system for ground lines to reduce the project costs and improve the quality of our service.

Improvement Performance



Power Facilities Management Service in the Customers' Premises

In 2017, in order to prevent accidents caused by electric power facilities within the customer's premises such as parking lots, we relocated 139 units of power facilities, provided emergency recovery manuals, and reserved more space for passage. In addition, we provided 24-hour remote load monitoring and internal transformer thermal imaging analysis of customers' power reception facilities for 2,638 apartment buildings free of charge to prevent power failure and ensure the safety of people and property.

¹⁾ HVD: High Voltage Direct Current

Ranked **1st** for 3 consecutive years
 World Bank Corporate Environmental Evaluation
 Power Supply Category (2014-2017)



BUSINESS CASE

ISO 55001 Asset Management System Certification

As a result of our high-quality service operation and asset management system for power facilities, we were certified for 'ISO 55001 Asset Management System²⁾' in January 2018. We were recognized for our efficiency in managing transmission facilities, investment plans, and standards in operation, maintenance and disposal process.

In the future, we will establish systematic preventive maintenance activities for major facilities based on the asset management system, and extend the life of the facilities and reduce costs through superior management process.



²⁾ A global management standard operated by the ISO (International Organization for Standardization) with the aim to reduce cost and improve productivity through optimized management during the entire lifecycle of assets

Customer-centered Power Facilities

Society and Eco-friendly Substations

At KEPCO, we are building ‘Open to Residents’, ‘Urban-friendly’ and ‘Eco-park’ substations for mutual growth with the local community. We are making the facilities more resident and environmentally friendly by building parks, trails, and sports facilities and providing access for the local community.

The ‘Open to Residents’ type substations will include a social welfare center and electric vehicle charging station on the ground while power facilities are located underground at the 154kV Dongpyeongtaek Substation. The ‘Urban-friendly’ type substation will be designed with outer walls and outdoor environment in harmony with the surrounding areas and located at the 154kV Seochang and Shinpyeong Substations while ‘Eco-park’ type substation will be incorporated into the 154kV Danginri Substation. We are committed to transforming substations into resident-friendly facilities for the local community and sustainable future.

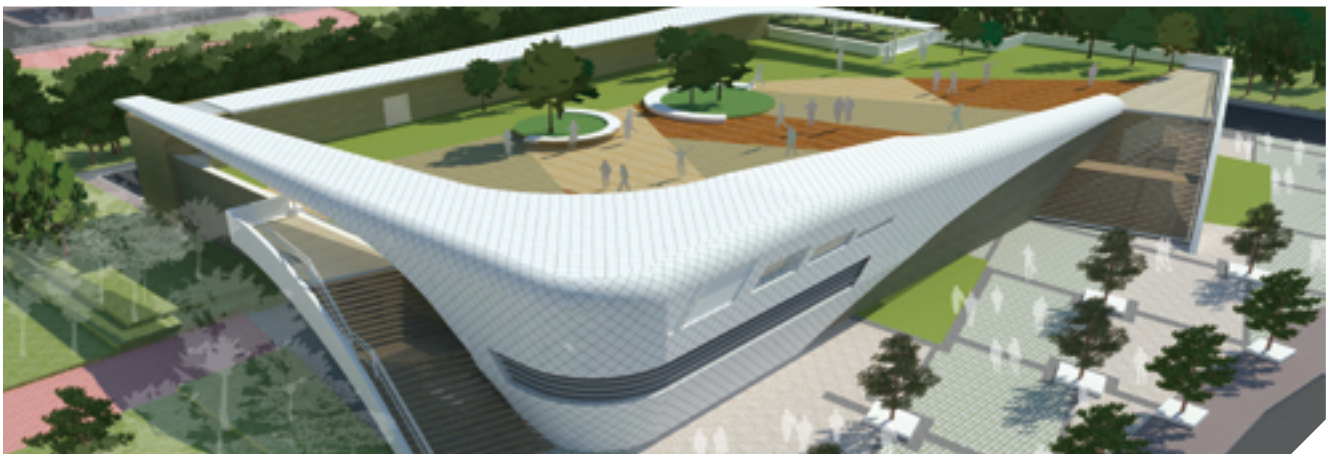
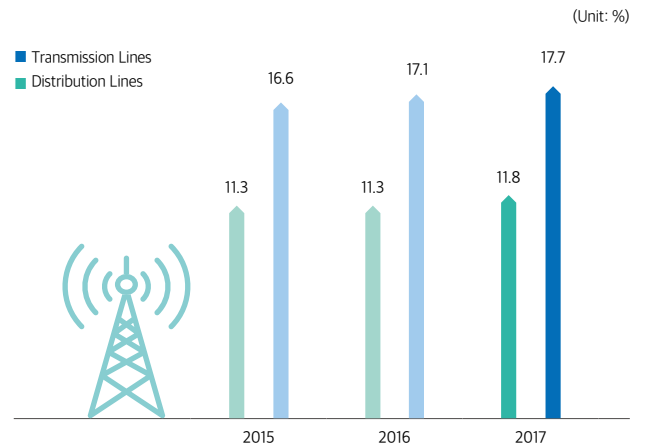
Overview of Community-Friendly Open Energy Park

Type	Ground: park + sports facilities + EV charging station / Underground: power facilities
Feedback	Public hearing, meeting with local government (5 times), exhibition of model (BIXPO)
Demo Facilities	154kV Dongpyeongtaek Energy Park in the Godeok International District

Undergrounding of Transmission and Distribution Lines

We are expanding the eco-friendly electric power infrastructure through underground line projects as we improve the living environment and landscape for people. When building our transmission and distribution lines, we construct the transmission line considering the residents and the environment, we prioritize the areas for building underground facilities based on their proximity to living environment such as residential areas and school. In addition, we reduce the financial burden on local governments through the 10-year zero-interest amortization payment program and the distribution of project cost payment. Meanwhile, we are continuing our underground line projects with a focus on areas with poor facilities to improve safety and prevent disasters.

Undergrounding Rate of Transmission and Distribution Lines

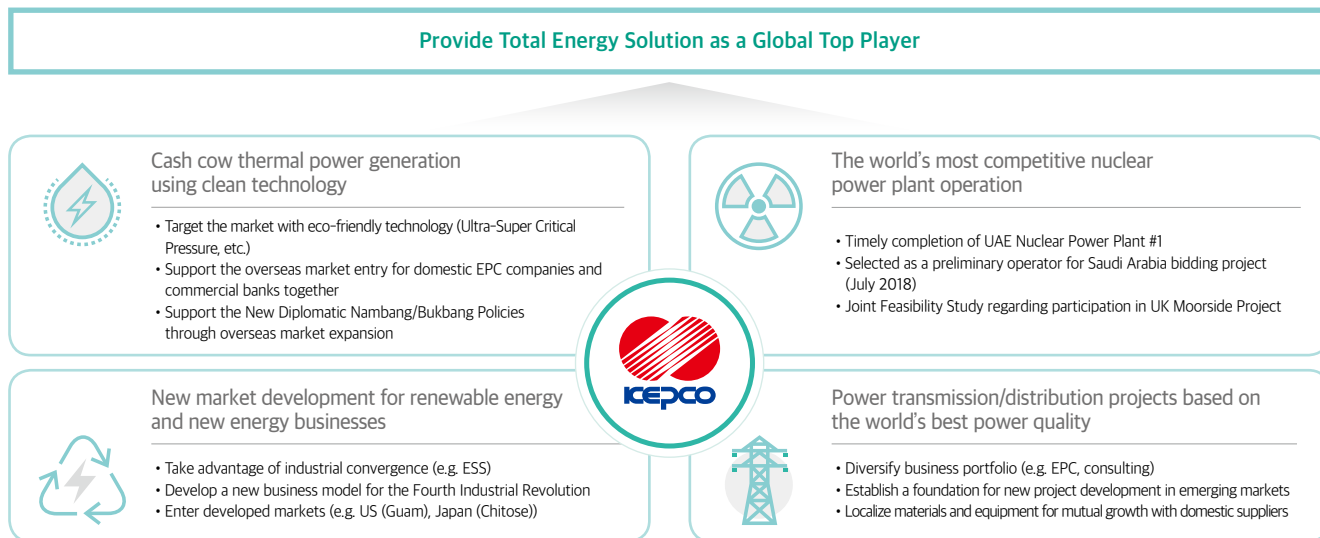


△ New Concept Substation

Strengthening Global Portfolio

Global Business Strategy

At KEPCO, we are strengthening our overseas business performance through diversification of our business portfolio to maximize profit and minimize risks by focusing on our strengths. In order to optimize our business portfolio, we are focusing on new business opportunities and market development based on our environmental change and internal capacity analysis.



Generating Revenue through Diversification of Global Business

Power Generation Sector

At KEPCO, we have made remarkable growth in the global market by strengthening our market position in Asia while expanding our presence in the Middle East, South and Central America and Africa as a large-scale Independent Power Producer (IPP). Our major projects include Malaya 650MW heavy oil plant rehabilitation and operation project, which is our first overseas project, Mexico Norte II gas-fired combined-cycle power generation (433MW), Saudi Arabia Rabigh heavy oil power generation (1,204MW), and Jordan Al Qatrana gas combined power plant (373MW). By successfully completing these projects, we showcased our superior technological expertise and project management performance in the global market.

In September 2017, we won a contract to build and operate Pulau Indah gas-fired combined cycle power generation plant in Malaysia, building a bridge into the Malaysian power generation market. In July 2018, we signed the contract for the Vietnam Nghi Son II coal-fired power business (1,200MW) and strengthened the foundation for our entry into the market.

Nuclear Power Sector

In 2016, we signed the world's largest investment contract for nuclear power plant operation in the UAE and secured KRW 54 trillion in sales over the next 60 years. Demonstrating our unparalleled expertise throughout the entire business operation as well as nuclear power plant construction. With the aim of completing the first UAE nuclear power plant, we are focusing on responding to the changing environment in the global nuclear power market.

Power Transmission/Distribution Sector

Based on our superior technological expertise and network in the EPC and consulting areas, we are successfully carrying out transmission/distribution consulting projects in Dominica, Nigeria and Cambodia. In Dominica, we are recognized for our excellent technological expertise and business management as we received another smart distribution network project worth USD 38 million from CDEEE (Corporación Dominicana de Empresas Eléctricas Estatales, Dominican Corporation of State Electrical Companies) after the completion of the power distribution EPC project in 2011 and 2016. Furthermore, we were able to build a strong foundation to undertake global distribution network projects in the future.



△ Kazakhstan Power Transmission and Substation EPC Project

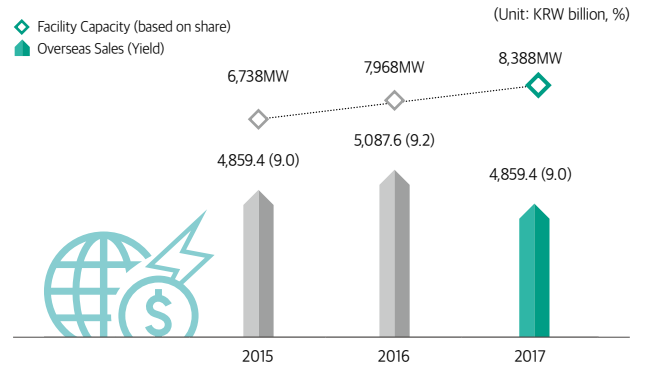


△ Distribution network projects in the Dominican Republic



△ Mexico Norte II Gas-Fired Combined Cycle Power Generation

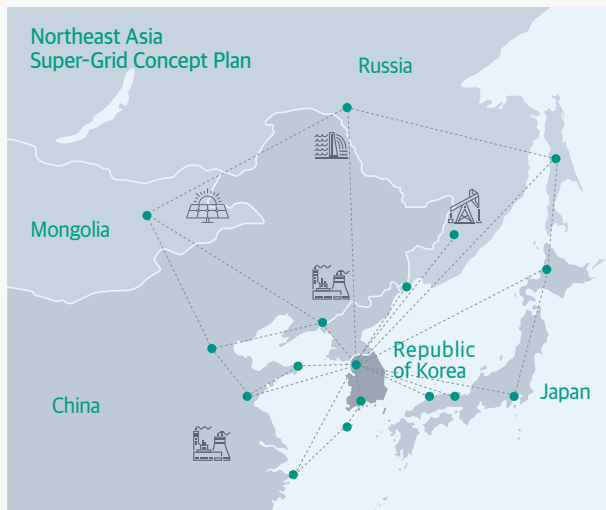
Overseas Sales, Yield and Facility Capacity



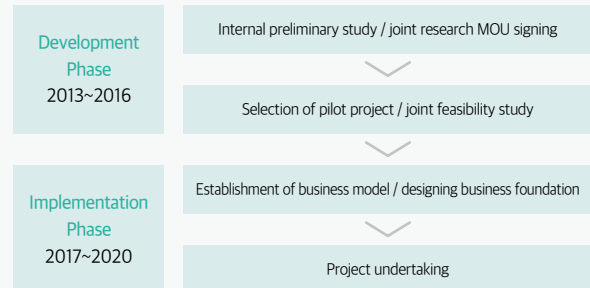
BUSINESS CASE

Strengthening Energy Cooperation through Super-Grid in Northeast Asia

We are undertaking the 'Northeast Asia Super-Grid Project' to lead the cooperation in the energy sector in Northeast Asia. In order to implement the project, we completed 'Korea-Russia Joint Preliminary Feasibility Study' in 2015. In March 2016, the Preliminary Feasibility Study for System Coordination MOU was signed among Korea, China, Japan and Russia.



In December 2017, we signed an MOU with the GEIDCO* and the SGCC (State Grid Corporation of China) to develop the 'Korea-China Power-Grid Development Project'. To promote system coordination and undertake joint resource development projects, we are going to organize an operation committee and joint working group and carry out additional research.



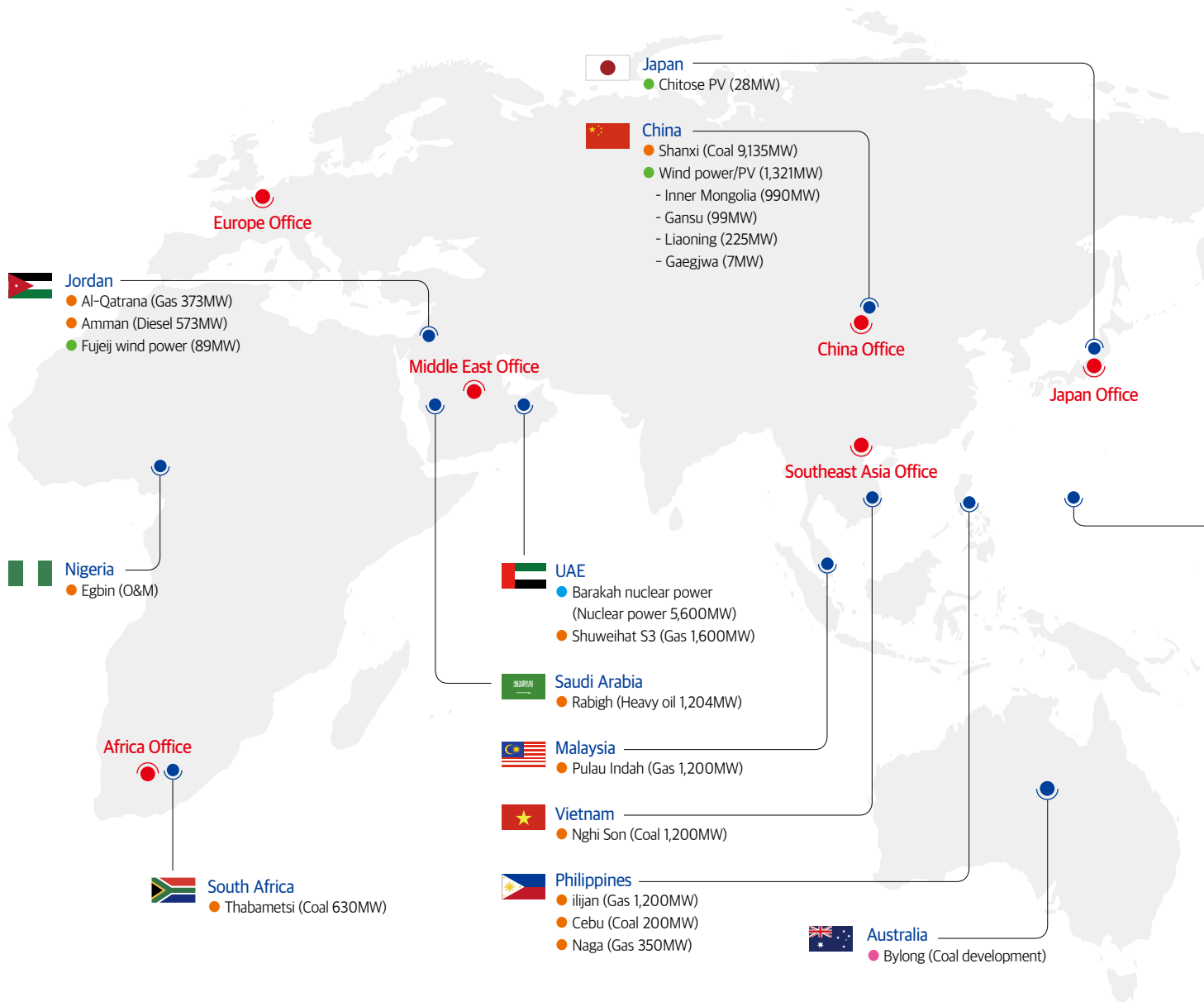
* GEIDCO: Global Energy Interconnection Development and Cooperation Organization

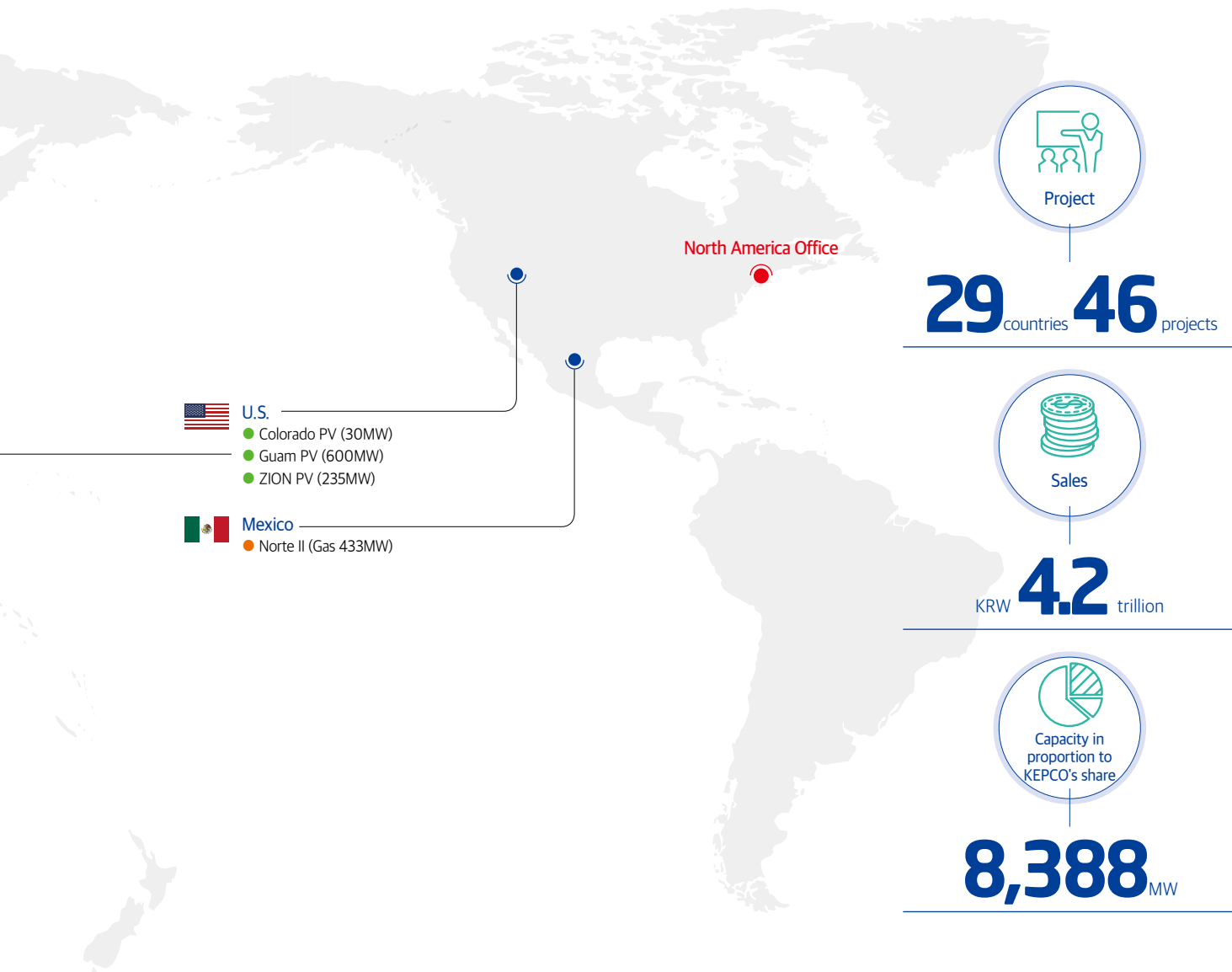
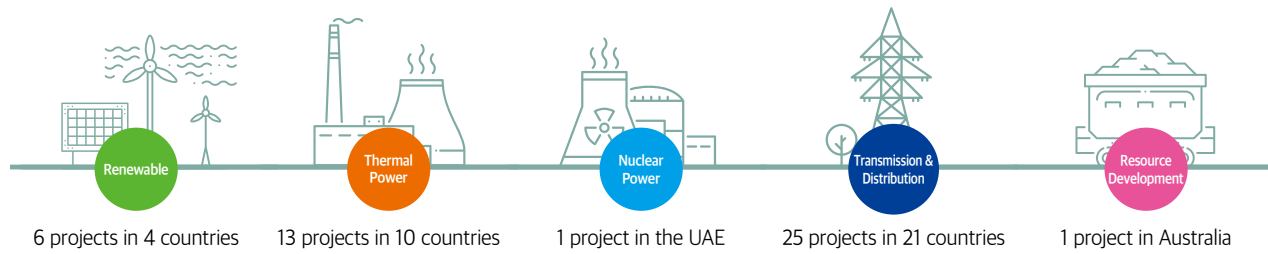
BUSINESS STORY

Building Global KEPCO Energy Belt

Status of Overseas Business

At KEPCO, we are carrying out 46 thermal power, nuclear power, renewable energy, and transmission and distribution projects in 29 countries (as of the end of June 2018). Based on our superior expertise in overseas projects and operational competency with the focus on mid-to-long-term profitability, we are building Global KEPCO Energy Belt as a global eco-friendly energy provider through expansion of low-carbon, high-efficiency core businesses in the clean and renewable energy sectors.





Topic 3

Responding to Climate Change

Management Approach

Since the official announcement of the Paris Agreement on Climate Change in 2016, Republic of Korea declared its plan to reduce its BAU GHG emissions by 37%. The agreement is a message to announce the transition to a low-carbon society. The new climate regime is our new opportunity and challenge for the future. We are engaging in joint activities with our group companies to reduce GHG emissions and improve energy efficiency based on the strategy. We are also taking initiatives to promote sustainable energy by applying eco-friendly practices throughout the value chain in the electric power industry.

Risk

- Increase in demand for GHG emissions reduction in response to the new climate regime
- Strict restriction and monitoring of environmental pollutants (e.g. particulate matter)

Opportunity

- Creating jobs in the renewable and new business sectors
- Increased demand and market for eco-friendly-technologies (CCUS)

Key Performance

CDP 'Carbon Management Sector Honors'
Top company in response to climate change



Top 2 company for consecutive years

GHG Emissions Reduction



50,000 ton CO₂eq

R&D for GHG Emissions Reduction



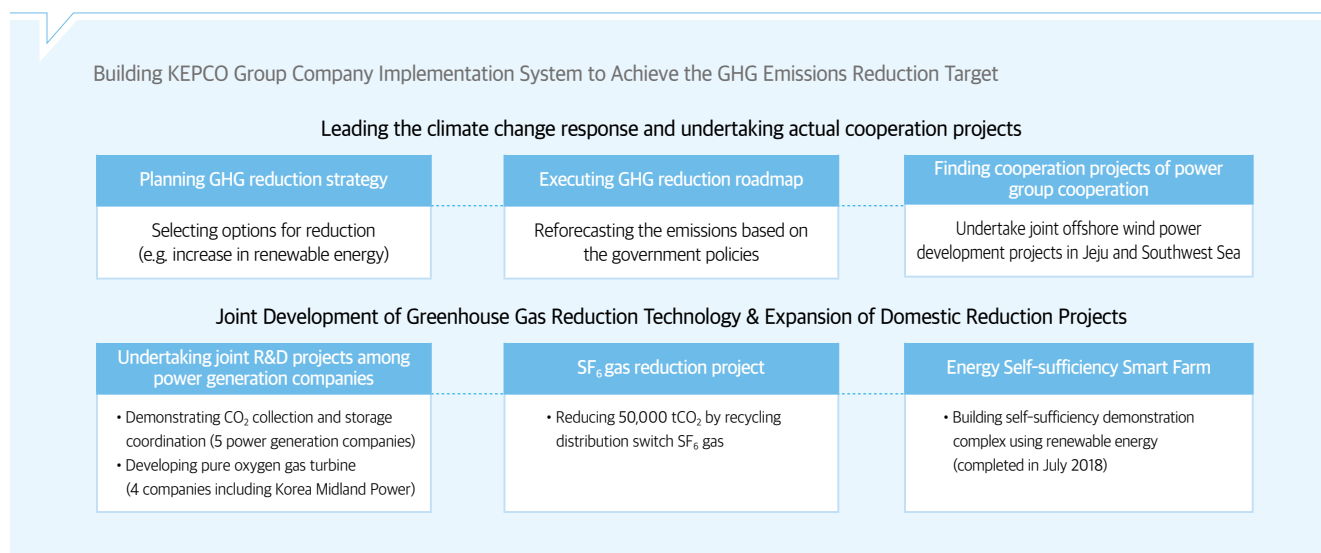
24 Cases

Climate Change Response Strategy

Building Joint Response System with Power Group Companies

Republic of Korea announced its GHG reduction target as 37% of BAU by 2030 in response to the Paris Agreement on Climate Change. According to the 2017 National Greenhouse Gas Inventory Report, our national GHG emissions amounted to 690 million tons of CO₂eq in 2015, while the KEPCO group companies produced 201 million tons of CO₂eq. To achieve the reduction target of 58 million tons for the national GHG reduction goal, we and our group companies are strongly committed to reducing GHG emissions.

* 34 million tons out of 58 million tons in conversion part target is an additional reduction potential and will be confirmed prior to NDC in 2020.








Energy & GHG Management

Response to Emission Trading System

Being subject to the emission trading system, we are engaged in emission trading during the Plan Phase 2 (2018-2020). In order to reduce GHG emissions, As part of our internal GHG emission reduction plan, we are developing zero-energy buildings for our new office space in order to save energy while introducing renewable energy sources such as photovoltaic systems, ESS and smart home appliances by increasing the distribution of K-BEMS¹⁾ to maximize the energy efficiency of our existing office buildings. Meanwhile, we are going to invest KRW 50 billion in R&D projects for the reduction of GHG emissions until 2019.

¹⁾ K-BEMS: KEPCO-Building Energy Management System

Major Activities for Energy Saving & GHG Reduction

Classification	Major Activities	Energy Saving
 Zero energy office building	Construction of 5 new buildings with Grade 1** energy efficiency	2,725MWh/year
 K-BEMS development	Installation of photovoltaic systems (160kW) in 4 office buildings	6,659MWh/year
 Natural gas mixed firing	Baekyeong-do R&D demonstration (-end of 2018)	64tCO ₂ (1,375MWh/year)
 Waste-heat ORC power generation	Heuksan-do R&D demonstration (-end of 2018)	66tCO ₂ (141MWh/year)
 Increase in distribution of 23kV eco-friendly switch device for substations	798 BAY	385tCO ₂

Eco-friendliness of Value Chain

Production Phase

Construction and Operation of Eco-friendly Power Plant

The subsidiaries of KEPCO carry out environmental impact assessment in consideration of natural environment of surrounding areas and traffic conditions when building and expanding power plants, and report the results to the government. By doing so, we minimize the impact on local community and natural environment.

Pollutant Emission Control

The subsidiaries of KEPCO monitor the emission of air pollutants using the TMS (Telemonitoring System). In order to reduce sulfur oxides, nitrogen oxides and dust, we are increasing the use of clean energy while installing desulfurization, denitrification and dust collection facilities. In addition, wastewater generated in the process of power generation is collected at a single location and treated through physical and chemical process while recycling all the desulfurized gypsum generated from coal-fired power plants as raw materials for cement. When operating overseas power plants, we also improve our power generation facilities and apply environmentally friendly technologies to reduce pollutants and ensure compliance with the environmental standards of each country.

Reduction of Particulate Matters

Recently, health problems and environmental impacts caused by particulate matters have become a major social issue. With the aim of cutting emissions of fine dust by 50% by 2020, KEPCO will increase investment in the early enhancement of dust collection, DeSOx, and DeNOx facilities while shutting down outdated coal thermal power plants and discontinuing operations during spring by 2022.

In addition, we are supplementing the infrastructure for measuring particulate matters by expanding the particulate matter measuring system and developing automatic measuring system for plants. We are also carrying out 'Study of the Thermal Power Plant's Impact on Particulate Matters and Secondary Generation'.

Expansion of Investment in Environmental Facilities

At KEPCO and our subsidiaries, we are increasing our investment in environmental facilities to reduce pollutants. KRW 500 billion was invested in environmental facilities and the emission of air pollutants was reduced by 13,000 tons in 2017.

Use and Protection of Water Resources

At domestic business sites, KEPCO and our subsidiaries recognize the potential risk factors associated with water resources and reduce our consumption of water at a corporate-wide level even though our business is not exposed to such risks as shortage of water and contamination. We have reduced water consumption by applying sanitation systems designed to save water and we use only rainwater for landscaping. In addition, we organized an integrated management council for the dams and irrigation pool of Han River and are building a water supply system with dams nationwide such as Hwacheon Dam, Chuncheon Dam, and Uiam Dam through the Han River Water Control Center.

In order to conserve water resources at our overseas business sites, we use seawater instead of ground water in the Philippines (Cebu, Ilijan) and UAE (Shuweihat) while heavy water recycled from wastewater is used in China (Shaanxi Gemeng International) and air-cooling is used in Jordan (Al Qatrana).

Transmission Phase

Increase in Construction of Eco-friendly Power Facilities

At KEPCO, we are undertaking the construction of eco-friendly electric power facilities through the development of equipment and construction in harmony with our surrounding environment. We are expanding the use of tubular steel poles and apply eco-friendly coatings to steel towers to protect the surrounding area. Meanwhile, we are improving the urban landscape by legislating underground communication lines when building underground distribution lines.

Sales & Consumption Phase

Expansion of High Efficiency Device Market

At KEPCO, we are leading the high efficiency device market to improve the energy efficiency of our customers' facilities. In 2017, we invested KRW 32 billion to support the replacement of 41,000 units and managed to save 145GWh of energy, reduce 67,000tCO₂, and create 138 jobs. In addition, companies that participated in the program made KRW 116.3 billion in sales and we saved KRW 12.6 billion in power purchase and KRW 680 million in facility construction.



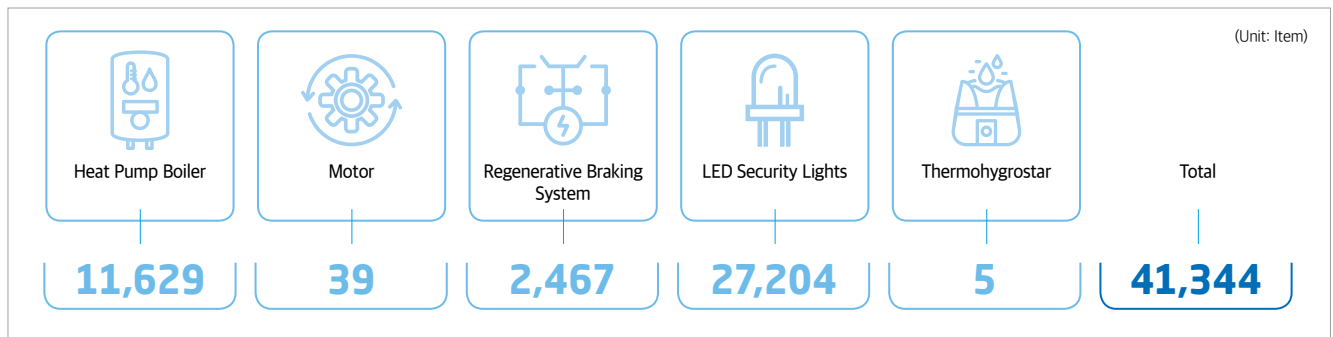
Implementation of EERS

EERS¹⁾ sets energy saving targets for suppliers and provides incentives or applies penalties based on the results. As Korea’s leading energy supplier, we proactively implemented the government’s energy-efficiency improvement policies by operating EERS project in May 2018 for the first time in Korea. To this end, we established a dedicated team within the power demand and supply department and set up a long-term roadmap

with the goal of saving 36,438 GWh of energy by investing KRW 7.7 trillion by 2031 and are conducting research and analysis as well as system development. In the future, we will create a new ecosystem for the power industry by taking a proactive approach in EERS and ensuring efficiency in our investment while promoting sustainable growth in the low carbon era.

¹⁾ EERS: Energy Efficiency Resource Standards

High-efficiency System Support (2017)



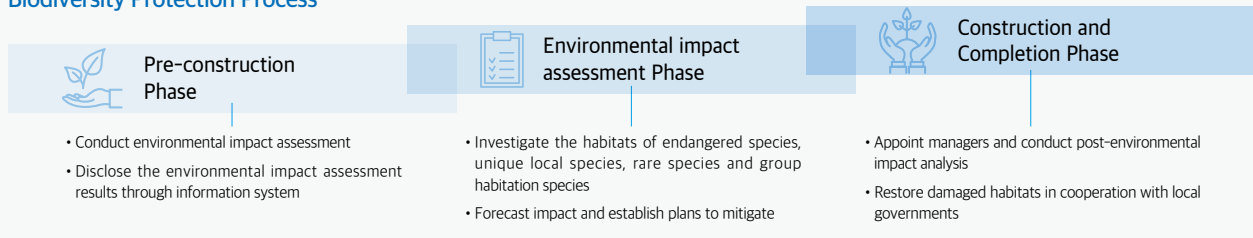
BUSINESS CASE

Protection of Biodiversity

KEPCO does its best to exclude the following biodiversity protected areas when selecting a site for transmission and substation construction: Wetland conservation area, wildlife sanctuary, forest genetic resource reserve, experimental forest, protected Baekdudaegan mountain range, etc. Prior to the implementation of a project, a specialist company conducts an electric power facilities construction impact assessment in accordance with the aforementioned criteria to select a project site that avoids biodiversity protection areas. A confirmation of the fact is made during the environmental impact assessment phase, and environmental risk is analyzed according to flora and fauna via literary, investigative, and field research to implement a mitigation plan as a protective measure. Electric power facilities construction and environmental impact assessments include matters related to flora, fauna, and ecology protection.

For major changes or expansions, KEPCO conducts an environmental impact investigation to examine the effects with respect to the scope of change/expansion in accordance with the Environmental Impact Assessment Act. Risks are assessed and measures for minimizing environmental impact are prepared in consultation with relevant accreditation bodies and local stakeholders such as environmental agencies. To implement recommendations obtained via consultation, implementation compliance officers are appointed, and environmental impact caused by construction is monitored through follow-up environmental survey services of specialized companies. The results of such surveys are submitted to the respective approval authority and disclosed online via the Environmental Impact Assessment Support System (<http://www.eiass.go.kr>).

Biodiversity Protection Process



Development of Eco-friendly Technologies

Securing Core Technology for Eco-friendly Power Grid

In response to increasing demand for eco-friendly and renewable energy, we secured core technologies to maximize the efficiency of our power grid, including ultra-high voltage DC transmission technology. In order to stabilize the power system, we are developing the world's first KG-ESS¹⁾ which can be applied to frequency adjustment, generator stabilization and voltage control. We expect to save KRW 11.8 billion in power generation costs and reduce CO₂ emissions by 170,000 tons per year.

In addition, we are part of a joint research project for a 170kV eco-friendly switch in which KEPCO and the manufacturer financed KRW 3.3 billion and KRW 24.9 billion respectively.

Commercialization of CCUS

With growing regulatory pressure on GHG emissions, the CCUS²⁾ market is expected to increase from KRW 8.2 trillion in 2015 to KRW 20.7 trillion in 2030. Since the technology can be applied not only to plants but also to such industries as petrochemicals, fertilizers, cement, and steelworks, its commercialization will lead to exponential growth of the estimated market. Therefore, since 2013, we have tested the 10MW wet CO₂ capture facility with a daily capacity of 200 tons at the Boryeong

Thermal Power Plant. Full operation is scheduled to start in 2020. The demonstration plant built at the Boryeong Thermal Power Plant has reached 90% of CO₂ removal rate³⁾ and 2.8 GJ/tonCO₂ of energy required to separate CO₂ with a purity level of 99.9%. The facilities were certified for durability and reliability with continuous operation of more than 5,000 hours up to 2016.

Securing SF₆ reduction technologies

At KEPCO, we developed technology to retrieve SF₆⁴⁾ gas which takes up 80% of the total GHG emissions in 2011 and improved the retrieval rate from 80% to 97%. In order to reduce the emission of SF₆ gas used for insulating in transmission and distribution sector, we increased the distribution of 23kV SF₆-free facilities and reduced GHG emissions in 2017. By retrieving, refining and recycling SF₆ gas for the non-distribution switches, we managed to reduce 50,000 tons of CO₂ in 2017.

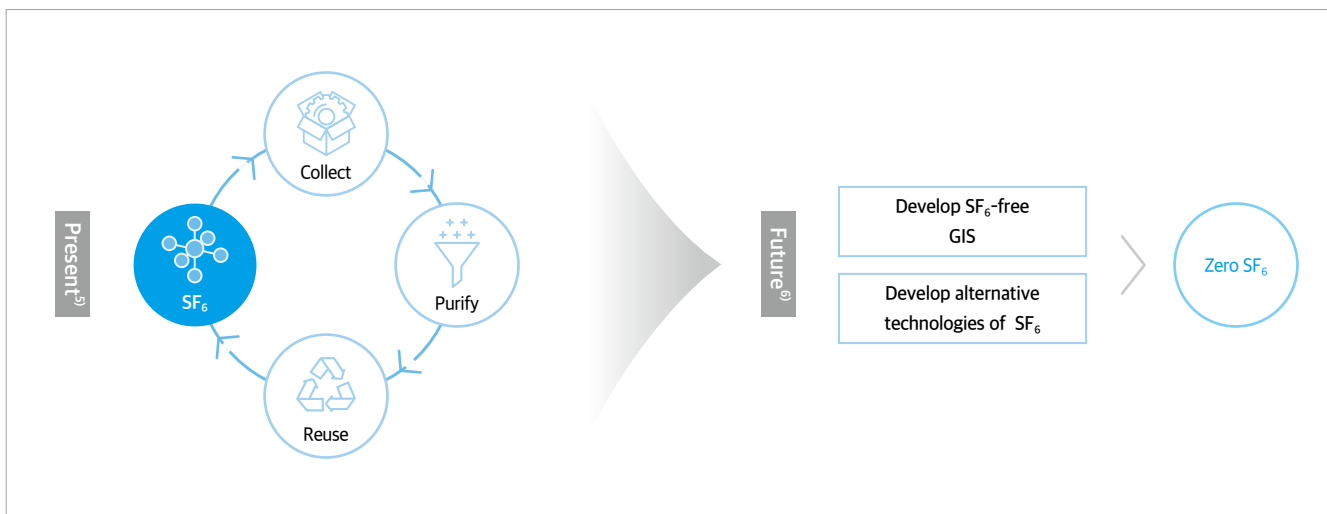
¹⁾ KEPCO Grid Energy Storage System

²⁾ Carbon Capture Utilization and Storage

³⁾ The removal rate can be raised to 100%, but this requires more energy consumption. As such, the removal rate is maintained at 90% as an optimal level from the economic perspective.

⁴⁾ Sulfur hexafluoride is one of GHGs, and its global warming potential (GWP) is 23,900 times higher than that of CO₂.

Managing the entire phase of SF₆



⁵⁾ Present: while using power systems that produce SF₆, collect, refine and recycle SF₆ to minimize its emission thereby contributing to the reduction of GHG emission.

⁶⁾ Future: eliminate SF₆ and prevent GHG emission by distributing power systems that do not use SF₆ (use dry air/alternative gas instead).

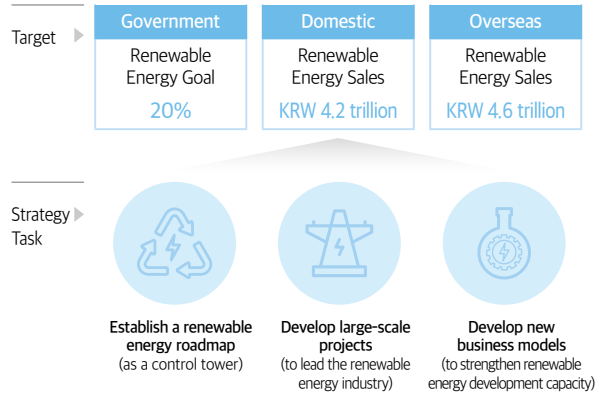
BUSINESS STORY

Leading Energy Transition through Distribution of Renewable Energy

Expansion of Eco-friendly Energy

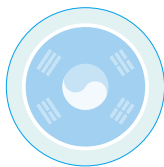
As the world is moving to end use of nuclear power and the demand for eco-friendly energy development increases, there is a growing interest in renewable energy among our stakeholders. The government announced its plan to increase the percentage of renewable energy to 20% by 2030 and gradually raise the mandatory renewable energy supply ratio to 28% under the RPS (Renewable Portfolio Standard) by 2030. Based on the '3020 KEPCO Renewable Energy Strategy', we are paving the way for a clean-energy future.

2020 KEPCO Renewable Energy Power Generation Strategy



Spreading Renewable Energy

At KEPCO, we continue to seek ways to reach the renewable energy goal set by the government and expand our renewable energy projects to build a foundation for switching to eco-friendly energy.



Domestic

In 2017, we developed 2.6GW of renewable energy worth KRW 13 trillion.

Hapcheon Lake Floating Photovoltaic Power
40 MW

- Built photovoltaic power facilities on the shared water surface
- KEPCO, K-Water and Mirae Asset established an SPC

Increased the efficiency of land usage and reduced environmental impact

Jeju Hallim Offshore Wind Power
72 MW

- Selected the location and shared profits with residents
- Established Jeju Hallim Offshore Wind Power Co., Ltd.

Built a foundation for 2030 CFI Jeju

Southwest Offshore Wind Power
2.5 GW

- Undertook 3-phase development project near Buan, Jeonbuk
- Commenced the 60MW demonstration project development

Stepped up as a leader in the offshore wind power industry



Overseas

In 2017, we secured a growth engine for the future in response to global market conditions and new climate regime by undertaking and completing four overseas renewable energy projects.

Classification	Overview	Performance
Renewable + New Energy Businesses	Completed Japan Chitose PV farm (28MW)+ESS (13.7MWh) • First overseas project to converge photovoltaic energy and ESS technologies • Jointly entered the market with partner companies of domestic financial and equipment	Entered the global photovoltaic energy market for the first time
	Won the U.S. Guam PV farm (60MW)+ESS (32MWh) projects • Undertaking the second largest renewable energy convergence business model after Chitose • First IPP project won through international bidding in the U.S., the largest power market in the world	Entered the U.S. IPP market for the first time
Renewable	Signed the agreement to acquire photovoltaic plants in California, U.S. • Strengthened the business capacity by winning the three largest photovoltaic projects (235MW)	Acquired the largest photovoltaic plants
Convergence	Completed photovoltaic project (7MW) in Gaegjwa, China. • Used existing wind power infrastructure and manpower to reduce costs	Increased the existing asset utilization projects

Topic 4

Creating Employee-friendly Workplace Culture

Management Approach

At KEPCO, we are committed to creating a workplace culture that promotes flexibility and open communication to keep our employees satisfied with the job and improve their productivity by maintaining a healthy work-life balance. We also implement a variety of programs to ensure the safety and health of our employees. In recognition of the importance of human rights, KEPCO has put in place various policies to respect the human rights of its employees as well as other stakeholders.

Risk

- Increase in demand for equal opportunity recruitment
- Change in working environment (e.g. increase in minimum wage, reduced working hours)
- Growing interest in human rights management (e.g. no discrimination)

Opportunity

- Generate creative ideas based on flexible and open corporate culture
- Secure growth engines for the future by securing female talents and leaders

Key Performance

Pool of global talents for the future
(strategic technology, overseas projects, Job Meister)



2,122
employees

Training expenses
per person



KRW **1.21** million

Percentage of female
manager



18 % increase, YOY

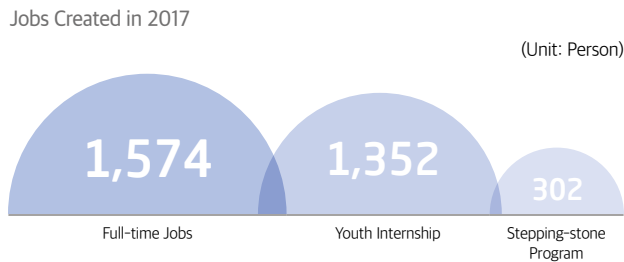
Securing Future-oriented Talents

Fair Recruitment Process based on Job Performance

At KEPCO, we employ talented individuals based on their qualifications for the job and the NCS¹⁾. We also strengthened our blind recruitment process by excluding their school and personal information from consideration and provide uniforms for the interviews in order to prevent any discrimination based on the applicant's university, gender, or age. In 2017, we established internal guidelines to prevent unfair recruitment practice and make sure that all employees sign the pledge against unfair recruitment practice online as part of our efforts to ensure fair and transparent recruitment practice.

Creating Quality Jobs to Solve Youth Unemployment

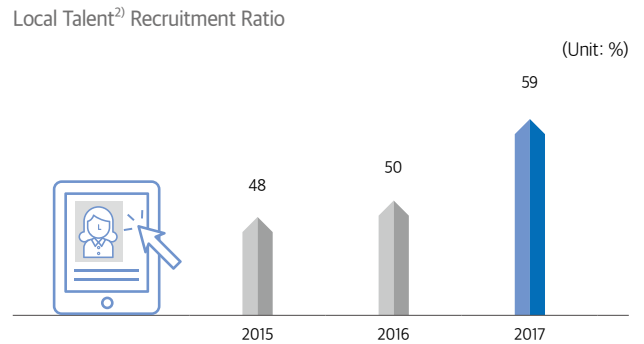
As a leading public corporation, we lead the creation of jobs in the public sectors by increasing the number of our full-time employees. Through the youth internships, In 2017, we hired 1,352 employees and increased the opportunities to experience jobs and improve their qualifications for the jobs. In addition, we established the Employment Stepping-stone Program in the public sectors and created 302 additional jobs to strengthen the job ecosystem and tackle youth unemployment.



Creating Social Values through Equal Opportunity Recruitment

At KEPCO, we are implementing various local employment policies to secure talents and boost local economy. We balanced development of local communities by implementing Local professionals system and limiting the applicants' location by their schools and promoting open competition by region. In addition, we increased the local talent recruitment rate to 17% under the Local Talent Recruitment Target System while providing training and mentoring for job applicants in the region. As a result, the local talent recruitment rate has reached 59% of new employees (927 employees) as the number of local talents hired increases at a steady pace in 2017. Furthermore, we hire high school graduates, and patriots and veterans as part of our equal opportunity recruitment program for underprivileged, and people with disabilities for the internship program.

¹⁾ NCS: National Competency Standards



²⁾ Employees who graduated from schools not located in Seoul, Gyeonggi, Incheon and foreign countries

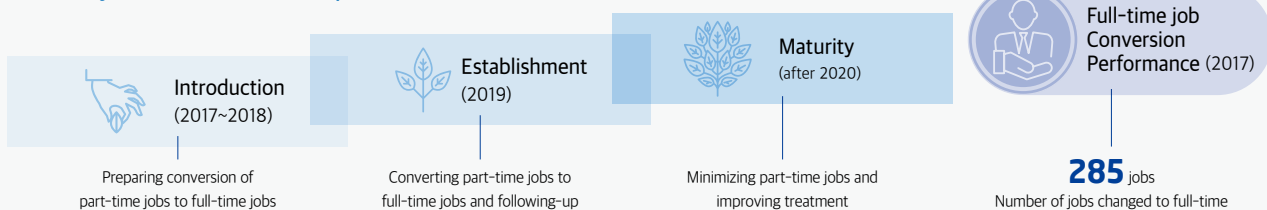


BUSINESS CASE

Improving Quality of Employment through Full-time Job Conversion

At KEPCO, we established a full-time job conversion roadmap in response to government policies to raise social awareness. We organized consultative bodies composed of our stakeholders including the 'Full-time Conversion Review Committee' and 'Labor-Management and Expert Council' to ensure fair and transparent process of conversion. Under the government guidelines, we selected candidates for full-time employment and all 285 of them became full-time employees as a result.

Full-time job conversion Roadmap



Employee Talent Development

In response to the paradigm shift in the power industry, we are working on mid-to-long-term human resource development strategies with a focus on creativity and vision to create a new energy eco-system.

HRD Implementation Strategy & Areas of Focus

HRD Strategy	Maximize organizational competency in transition period	Advance core competency for main projects	Strengthen specialized competency for growth business
Areas of Focus	Focus on internal competency in response to climate change <ul style="list-style-type: none"> Sharing management policy and core value Lead the trend in energy industry Improve the expertise in talent development 	Advance core competency for main projects <ul style="list-style-type: none"> Focus on the large number of new employees Increase the organizational acceptance of high school graduates- Strengthen on-site training in work sites 	Strengthen specialized competency for growth business <ul style="list-style-type: none"> Improve the digital talent development Develop core human resources with advanced academic degrees Strengthen the humanities-based convergence thinking
	Innovate HRD for management efficiency <ul style="list-style-type: none"> Measure performance, strengthen career management Maintain balance between HRD and financial stability Strengthen ability to solve management issues 	Increase training opportunities for employees <ul style="list-style-type: none"> Improve the opportunities for resuming training Reduce the blind spot in training Provide support in advance for retiring employees 	Develop human resources specializing in overseas market <ul style="list-style-type: none"> Select human resources for overseas business Provide know-how on project acquisition and operation Develop human resources specializing in local language and culture

Operation of Systematic Training Programs

Training Areas	Programs
On-site	<ul style="list-style-type: none"> Job Meister: on-site problem solving and cyber-job counseling (599 employees) CoP (learning organization): learning for problem solving (304 programs, 2,071 employees)
Advanced	<ul style="list-style-type: none"> Overseas business training to secure source technologies and business expertise Specialized academic degree programs: specialized programs for overseas business, technology management convergence program, advanced energy program, KINGS nuclear sector master's degree program
Humanities	<ul style="list-style-type: none"> Programs designed to boost creativity and innovation e.g. Humanities Academy, Management Leader Forum, Book Learning
Language	<ul style="list-style-type: none"> Strengthening global competency through strategic, cyber and telephone foreign language lessons

Female Talent Development

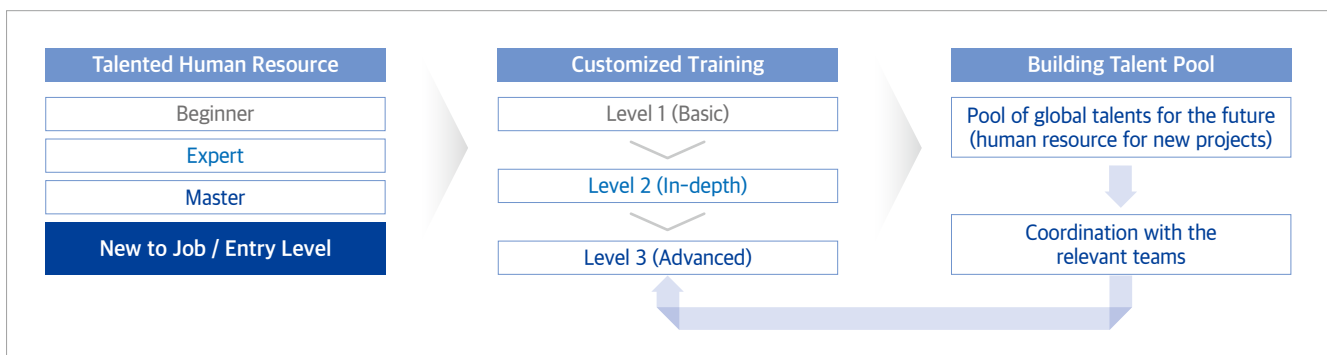
As the importance of female talent grows in the global business environment, we have steadily increased the number of new female employees. We are also diversifying our training programs for female employees by organizing such programs as female managers' workshop, next-generation female leadership development program, and career development program. As the result of these efforts, the percentage of female managers increased by 18% from the previous year In 2017.

Talent Development

At KEPCO, we develop our human resource based 10 core strategic technologies and areas (e.g. development of new business model, response to policies, institutional design, strategic technology R&D). In order to gain competitive advantages in the new energy market, we organize systematic training courses such as specialized training for overseas business and technology management convergence. We also improve correlation between training and actual performance through strategic human resource management.



Human Resource Development for New Energy Projects

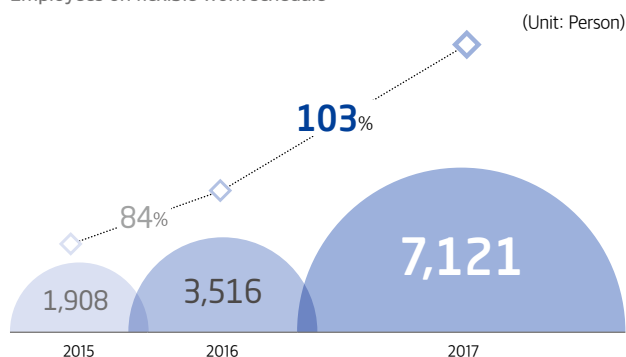


Maintaining Healthy Work & Life Balance

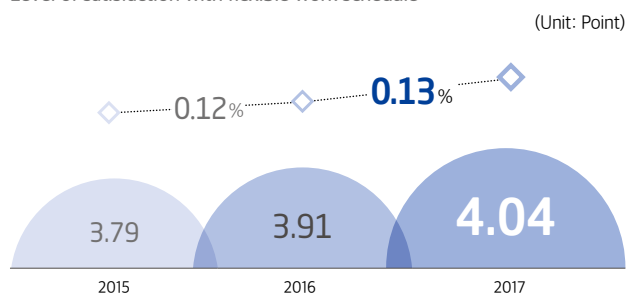
Creating Employee-friendly Workplace

At KEPCO, we make sure that our employees can focus on their jobs, maximize their productivity and maintain a healthy work-life balance. We have divided working hours into 59 types in terms of flexibility, options and intensity. In 2017, the number of employees using flexible work schedule increased by 103% from the previous year, and their job satisfaction level also increased as a result.

Employees on flexible work schedule



Level of satisfaction with flexible work schedule



Open Communication Culture

We established horizontal organization to promote open communication to improve business performance and resolve labor issues while keeping our employees satisfied in their jobs. In order to improve organizational culture and communication, we conducted employee interviews and surveys on organizational culture. Based on the tasks we selected with our employees, we carry out monthly campaigns throughout the year. We also promote open communication through dialogue with CEO, female leadership workshop, Lunch Meeting Day and Happy Family Day.

2018 Amendment of Collective Agreement (August 2018)

Improve the stability of jobs and working conditions

- Improve the stability of jobs for union members (layoff conditions)
- Added articles to protect workers on shift
- Increased the independence of union activities (improved the usage of facilities)
- Added articles against unfair dismissal
- Applied consistent standards to leaving work on time and honorary retirement, removed dead-letter articles, etc.

Improved the leave system

- Established new types of leave for self-development and increased the existing leave term
- Added articles for staffing, e.g. employees on leave
- Improved the annual leave system for new employees
- Guaranteed long-term leave (10 days or longer) and annual leave credit system
- Established special paid leave
- Extended leave for special family occasions

Improved maternity protection

- Improved parental leave system requirements and terms
- Added articles to prevent unfair treatment against parental leave
- Improved support for pregnancy and childbirth (extended leave and work hour reduction)
- Increased support for childcare and established new childcare leave

Increased the engagement of employees in management and improved human rights and privacy protection

SPECIAL STORY

Building Ecosystem for Sustainable Job Creation

In line with the mid-to-long-term strategy for creating job and the government’s roadmap, we established the ‘KEPCO Job Creation Strategy’. In order to focus our corporate-wide resources to achieve job creation goals and improve implementation, we organize ‘KEPCO Job Creation Committee’ and ‘Job Creation Policy Team’ while ensuring the policies are established in a fair manner through ‘Labor-Management and Expert Counseling’.

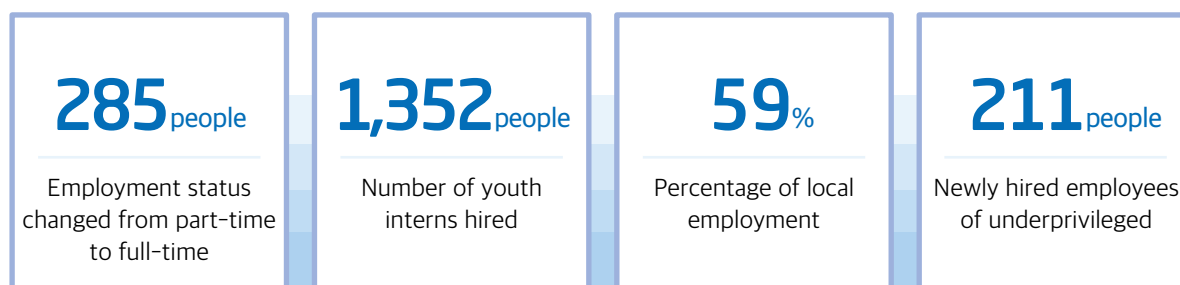




Sustainable Job Creation Performance Data

Creating Jobs to Build Sustainable Ecosystem

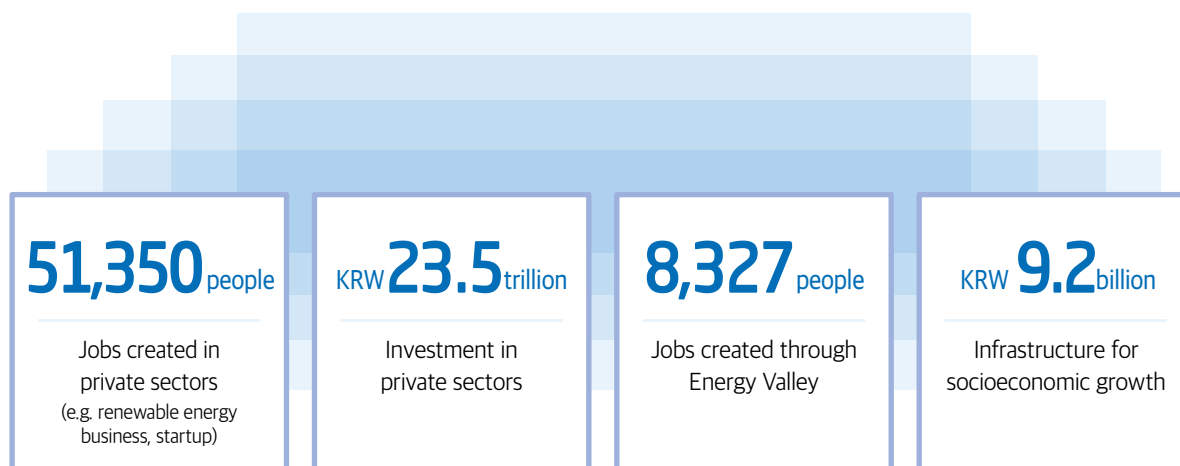
As a major public corporation, we are committed to setting an example when it comes to creating jobs. In 2017, we created quality jobs by changing part-time jobs to full-time jobs and hiring underprivileged such as youth interns and people with disabilities.



More information about the performance can be viewed on p49

Leading Job Creation in Private Sector

At KEPCO, we established 4 Strategies and 16 Key Action Tasks to create jobs in private sectors. As we are moving into the era of the Fourth Industrial Revolution, we increased our investments in such areas as building Energy Valley and supporting economic organization in order to create jobs with a focus on social values.



More information about the performance can be viewed on p65, p69

Safety & Health Management

Building Innovative Safety and Health Management System







At KEPCO, we are building an advanced management system to make our workplace safer and healthier. First of all, we established 'Next Generation Occupational Safety and Health Master Plan' and KPI, and strengthened our Occupational Safety and Health Manual to improve our safety and health management practices. To meet global standards, we make sure that all our workplaces and suppliers are certified for occupational health and safety management system (K-OHSMS 18001).

Meanwhile, we organized Safety Management Committee comprising 5 outside experts from the government, academic society and safety management organizations, and 5 internal experts to discuss important safety issues including emergency response measures.

Establishment of EHS Management Policies

In May 2018, we set EHS (Environment, Health and Safety) as top priority in our business management and established and shared EHS management policies at a corporate-wide level.

Summary of EHS Management Policies

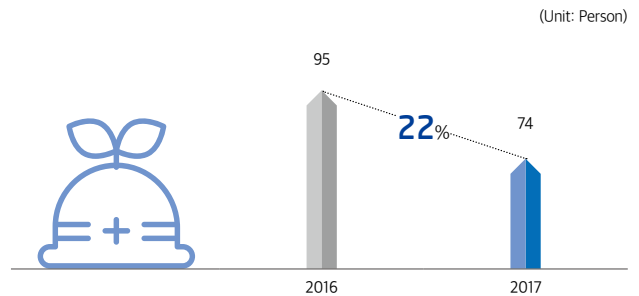
 Management Values	Set EHS as a top priority and encourage participation of all employees
 EHS Standard Management	Introduce and implement the EHS Standard Management System in domestic and overseas workplaces
 Legal Compliance	Ensure compliance with the laws and regulations in relation to EHS
 Risk Management	Create safe and healthy workplace environment, eliminate risk factors and ensure eco-friendly management
 Communication & Cooperation	Communicate with the stakeholders on our commitment to EHS and strengthen EHS partnership
 Innovation & Improvement	Continue to improve EHS management by sharing ideas and new technologies, and organizing training



Building Safety Management Support System for Mutual Growth with Suppliers

In order to create a safe workplace environment for our employees and suppliers, we are strengthening our safety management. In 2017, 64,550 on-site safety inspections and 242,565 remote monitoring sessions on construction sites were conducted to reduce the number of disaster victims at our work sites. For 28 suppliers that had incidents in 2016, we carried out safety training for 885 representatives and 34,257 employees while providing special safety analysis and consultation as part of our safety management support program.

Number of Victims of Industrial Disasters



Activities of internal member safety enhancement

- Pilot operation of 365 Safe Town Tour Program (578 participants from Gangwon Division and others) → Expand in 2018 (include suppliers)
- Take initiatives for spreading a safety culture [e.g. workshop, zero accident campaign, industrial safety period (103 commendations / incentive KRW 120 million)]

Securing Source Technologies for Disaster Prevention

To prevent human error, we developed and introduced 'Wearable Safety Device Disaster Prevention Technology'. We also developed a safety and health system using cutting-edge technology based on the result of the research conducted on the Fool-proof¹⁾ system. As a result of these efforts, the number of disaster casualties caused by human error was reduced from 95 in 2016 to 74 in 2017, a drop of 22%. In addition to technological development, we improved our process to ensure safety. In 2017, we removed such high-risk processes as direct wiring, wire transferring and line distribution and developed non-contact Smart Stick-based indirect wiring process to improve the safety of workers.

¹⁾ Fool-proof: a device or method designed to prevent human errors caused by negligence or identify such errors

Health Management Programs for Employees

In order to promote the health of our employees, we took a proactive approach in preventing occupational diseases as we conduct regular checkups (annual) and special checkups (bi-annual) and keep track of their health conditions. We also organize job stress analysis and psychological counseling programs as well as meditation and chi exercise as part of the Healing Camp to help our employees maintain their physical and mental health.



BUSINESS CASE

Open Safety and Disaster Demonstration Test Site

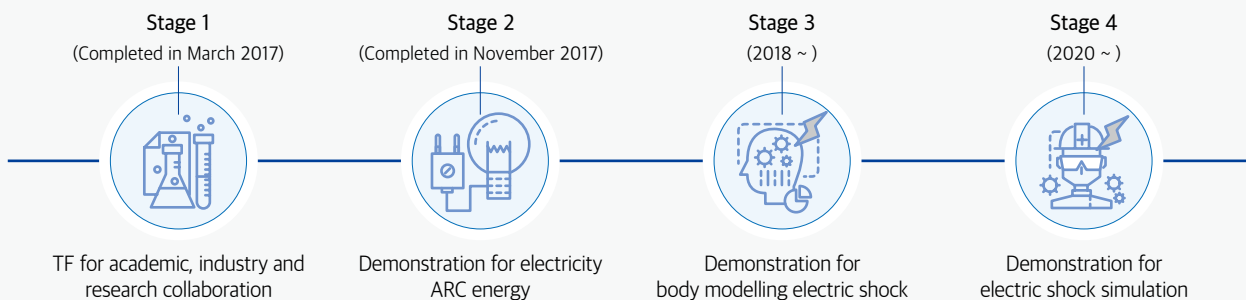
In November 2017, we established the 'Open Safety and Disaster Demonstration Test Site' to test safety equipment and personal protective gear for the first time in Korea.

The site is designed to develop source technology for safety and disaster prevention and improve the level of safety while preventing industrial disasters. The main facilities include arc generation device, arc energy gauge and a system designed to test safety gear and protection against electric arc, human body impact analysis systems, and video recording systems for demonstration tests. These facilities are available for use by any academic, industrial and research organization.

Up to now, we relied on overseas test institutes for product development due to a lack of safety demonstration infrastructure in Korea. Thanks to these facilities, we expect to save development cost and time in the future.



Roadmap for establishing 'Open Safety and Disaster Demonstration Test Site'

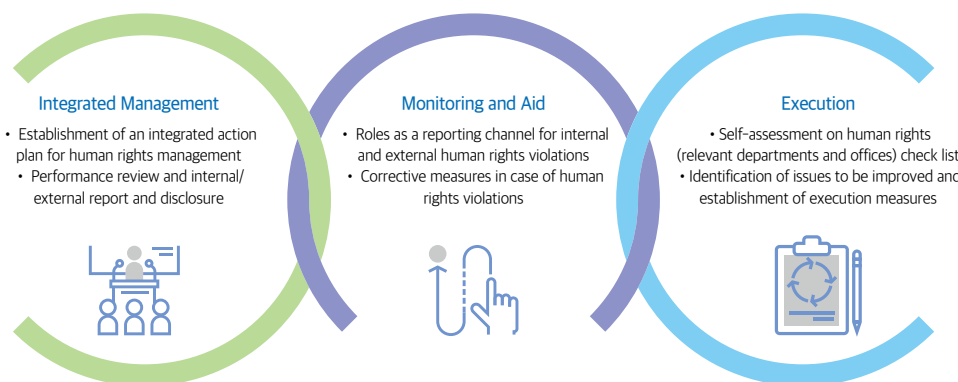


Leading Human Rights Management

Human rights management system

KEPCO practices human rights management in accordance with the UN Guiding Principles on Business and Human Rights (UNGPs) and the Human Rights Guideline of the National Human Rights Commission of the Republic of Korea. In recognition of the importance of human rights, KEPCO has put in place various policies to respect the human rights of its employees as well as other stakeholders. We took the initiative to build and establish the human rights management execution system, and thus became the first Korean company to join the UN Global Compact in 2005. We also enacted and promulgated the human rights management declaration in 2015 for the first time among public companies in Korea.

Human Rights Management System



Human Rights Risk Assessment and Issues

Human Rights Risk Assessment and Due Diligence

To identify and evaluate the risks of human rights violations, we classified risks into 38 sub-categories in 10 major areas in accordance with the UNGPs, and prepared the checklist based on which we conduct self-analysis and reviews. We strictly prohibit any discrimination based on gender, race, age, or social status while ensuring full compliance with the Labor Standards Act in Korea as well as the International Labour Organization (ILO) regulations, such as the 'Convention Concerning the Prohibition and Immediate Actions Toward the Elimination of the Worst Forms of Child Labor' and 'Convention Concerning the Abolition of Forced Labor'. In 2017, no relevant violation was committed at our business sites.

Identification of Human Rights Issues and Mitigation Actions

At KEPCO, we identify human rights issues in relation to gender equality in the workplace (response to malicious complaints, etc.), safety and health, and employees working at the point of contact with customers, and take necessary measures to protect human rights. In addition, we investigate any violations of human rights in our supply chain and local community, and take actions to prevent and mitigate those violations.

Human Rights Issues and Mitigation Actions

	Employees	Suppliers	Local Community
Human Rights Issues	<ul style="list-style-type: none"> Organizational culture (e.g. gender equality) Complaints and grievances (e.g. sexual harassment) 	<ul style="list-style-type: none"> Safety management in workplace 	<ul style="list-style-type: none"> Noise and environmental pollution on the construction sites
Mitigation Actions	<ul style="list-style-type: none"> Creating corporate culture to ensure gender equality Establishing a hotline for online counseling 	<ul style="list-style-type: none"> Identifying and improving vulnerabilities in safety practice and conducting safety training 	<ul style="list-style-type: none"> Building facilities for local community and carrying out environmental impact assessment

Human Rights Protection

Sexual Harassment & Sexual Violence Grievance Handling Process

At KEPCO, we have implemented a grievance handling process for sexual harassment as part of our human rights management. The process of handling sexual harassment & sexual violence cases proceeds with the following steps: counseling, investigation, review by the Grievance Review Committee*, closure of the case.

*** Composition and Role of Grievance Review Committee**

- The committee consists of 6 committee members including Chairman (HQ: Head of Human Resource Division, Business Site: Head of the Business Site).
- An external expert may be hired to prevent sexual harassment & sexual violence if needed.
- The investigation of sexual harassment cases is supported while necessary actions are taken to protect the victims and prevent recurrence.

Human Rights Protection Program for 'Emotional Labor Workers'

At KEPCO, we organize various emotional support programs to support our employees' mental health including job stress diagnosis for employees, Healing Camp for employees working at the point of contact with customers, and psychological counseling services for all employees.

Sexual Harassment Grievance Handling Manual



Human Rights Protection Program



Promoting Gender Equality in Workplace

In order to promote gender equality in our workplace, we display promotional posters and training videos at a corporate-wide level. We also organize sexual harassment prevention training programs* to prohibit sexual harassment and strengthen our disciplinary actions while designating at least one counselor at each business site to provide counseling on sexual harassment & sexual violence. In 2017, we established an online sexual harassment counseling hotline to provide prompt counseling on grievances. Furthermore, we prepared and distributed 'Sexual Harassment & Sexual Violence Grievance Handling Manual' to promote gender equality in our workplace.

* Sexual harassment prevention training at headquarters (1,964 completed, 4 times) / Corporate sexual harassment prevention cyber training (19,698 completed)

Creating Safe Workplace Environment for Suppliers

We established a safety management support system and safety and health cooperation programs for our suppliers. By organizing a periodical cooperation meeting, risk assessment and safety training, and providing technical support, we help create a safer work environment for the employees of our suppliers. In addition, we are committed to protecting the human rights and improving mental health for them as we provide job stress diagnosis and psychological treatment for customer service representatives who suffer from emotional stress.

Topic 5

Leading the Realization of Social Value

Management Approach

At KEPCO, we fulfill our responsibilities towards public benefit by creating economic and social values. Our commitment to creating social values, in particular, is aligned with the nature of our business and strategy as well as maximizing values for our stakeholders. In addition, we engage in various activities to drive sustainable growth with our suppliers and local communities while creating values for our customers.

Risk

- Diversified demand and growing expectations from customers
- Strengthened legal requirements for fair practice and win-win growth
- Increased chance of complaints and conflict with local community due to lack of communication

Opportunity

- Build positive corporate reputation and customer trust
- Establish sustainable ecosystem through cooperation with suppliers
- Increase social values through local community support

Key Performance

NCSI (National Customer Satisfaction Index) In the Public Sector



Ranked **1st** for **3** consecutive years

Purchase from small and medium-sized companies



72.1%

Employee volunteer activities Participation time



169,207 hours



Customer Service Innovation

Organizational Operation for Customized Service

To provide services tailored to the needs of our customers, we established a Marketing Division in 2017 while strengthening our facility management and customer response based on new regional offices to improve convenience and accessibility.

Customized Rate Discount Service

We offer discounts on specific areas to reduce financial burden on the general public and raise the welfare benefit. In 2017, we raised customer satisfaction by improving the system so that benefits can be provided automatically when birth notification is filed in order to increase benefits for households with a newborn.

Improving Customer-oriented Service

At KEPCO, we improve our policies and systems based on customer feedback. In 2017, we strengthened our policies on preventing customer complaints. Based on the impact of conflicts and reviews, we select business locations and establish a conflict resolution process to make final decisions. After the completion of the project, we use local consultation to resolve conflicts. Furthermore, the Site Selection Committee comprising representatives of local governments and residents selects the sites to make sure that residents can make decisions by themselves.

	Beneficiaries	School	Agriculture, Forestry and Fisheries	Traditional Market
Goal ▶	Energy welfare	Educational support	Financial support for farmers	Financial support for small businesses
Discount ▶	30% or KRW 8,000-20,000 discount for welfare recipients and households with multiple children.	20% discount for schools and kindergartens	20% discount for rice processing facilities and slaughter houses	5.9% discount for traditional market business owners
Financial Support 2017 ▶	KRW 483.1 billion (2.85 million households)	KRW 89.5 billion (17,000 households)	KRW 20.3 billion (1,000 households)	KRW 2.6 billion (23,000 households)



BUSINESS CASE

ICT and AI-based Customer Response Service

At KEPCO, we meet the demands of customers by updating our customer service process using next-generation information and communication technology, AI, big data and IoT. In 2017, we introduced 'PowerBot', a voice-interactive AI-powered robot, for customer service for the first time in the public sector. The 'PowerBot' is divided into 'Secretary Robot' that is in charge of internal regulations and coaching and 'Teller Robot' for customer service. The latter, in particular, features voice recognition and provides service in sign language as well as foreign languages for foreigners and people with a hearing impairment. In addition, our service system also supports 'Visual ARS Service' displaying text messages on the mobile phone screen and 'Voice ARS Service' with voice recognition while extending service operation hours to 24 hours a day, 7 days a week for easy accessibility. We expect to improve our service for people with hearing impairment and senior citizens, and make our customer contact points more accessible.



△ AI robot service launched




△ ARS service screen

Information Security Management for Customers


Meeting Various Customer Service Demands

At KEPCO, we provide various services based on mobile phones to provide real-time response and customer service access.




Mobile Information Process throughout the Power Usage Lifecycle

- SMS service on request for electric power service (June 2017)
- Downloadable request form and payment receipt (September 2017)
- Kakao Talk messaging service (October 2017)



Smart Customer Service System (April 2017)

- Previous system: call service
- Current system: interactive service using email, chat and text messaging (prevent failure during peak hours), immediate call response for people aged 65 or older



App-based Smart KEPCO Service (January 2017)

- App service based on the existing web service
 - Automatic address entry based on GPS
 - Mobile service request system
 - Mobile payment for moving charge

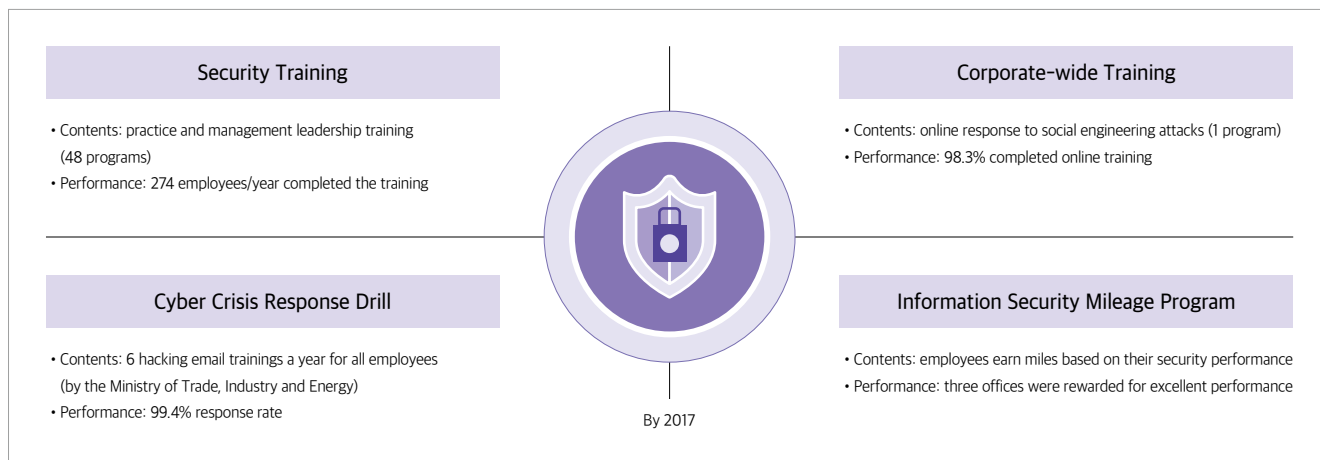
Strengthening Information Security System

At KEPCO, we take a proactive approach in our information security management system to protect our national power grid and customers' personal data from cyber threats such as ransomware and malicious codes. To this end, we are upgrading the security system for our power control, information and internet service while building security infrastructure for the new energy industry to enhance security for major infrastructure and information system. In addition, we are improving our cyber security by taking timely measures on identified vulnerabilities through security analysis.

Enhancing Personal Information Protection

We respond to various security attacks using information security technologies in a proactive manner. In 2017, we strengthened the security system for our infrastructure and new energy businesses while enhancing the personal information protection in the ERP and power sales information system to ensure full compliance with the Personal Information Protection Act. We encrypted more than 2 million pieces of personal information in the ERP system, and conducted a personal information impact assessment on personally identifiable information and sensitive sales information. As a result of these efforts, we have received the top rating on personal information management assessment by the Ministry of the Interior and Safety for the third consecutive year and major information and communication infrastructure vulnerabilities analysis by the Ministry of Trade, Industry and Energy for five consecutive years.

Personal Information Protection

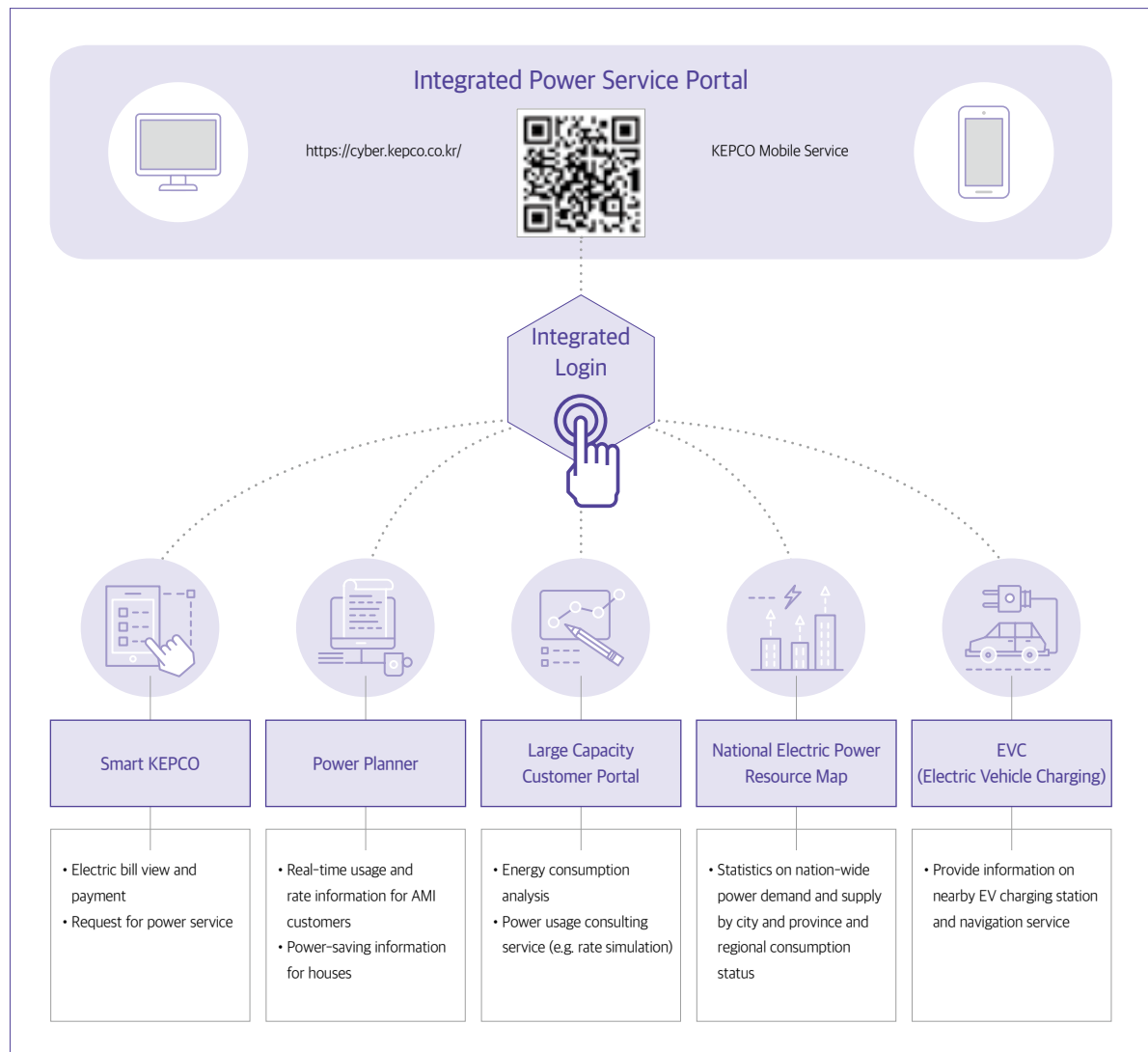


BUSINESS STORY

‘Integrated Power Service Portal’ with One-Stop System Support Opened

Overview of Integrated Power Service Portal

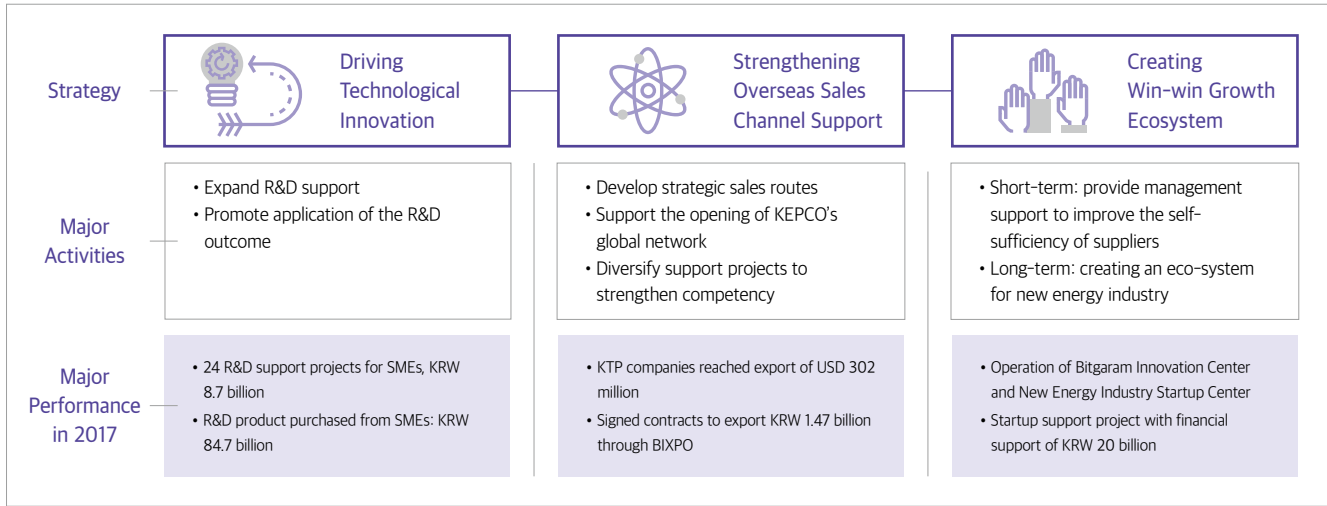
At KEPCO, we opened ‘Integrated Power Service Portal’ to provide access to information about the service including electricity bills and EV charging stations. In the past, various power system services were provided separately, so customers had to check multiple sites to access specific information. The Integrated Service Portal is designed to resolve this issue and has a single access point throughout the services to ensure easy access for customers. We also unified the channels and integrated similar systems to make it easier and more convenient for customers to access information. We will continue to improve convenience for customers by providing services tailored to their needs.



Win-win Growth System

To take a proactive approach to social demand and government policies on win-win growth, and explore new business opportunities in the era of the Fourth Industrial Revolution, we are strengthening our win-win growth support projects. In 2017, we implemented Win-win Growth Strategy in Three Areas including 'Driving Technological Innovation', 'Strengthening Overseas Sales Channel Support', and 'Creating Win-win Growth Ecosystem' to build a system to promote sustainable growth with our suppliers.

Three Execution Strategies for Win-win Growth



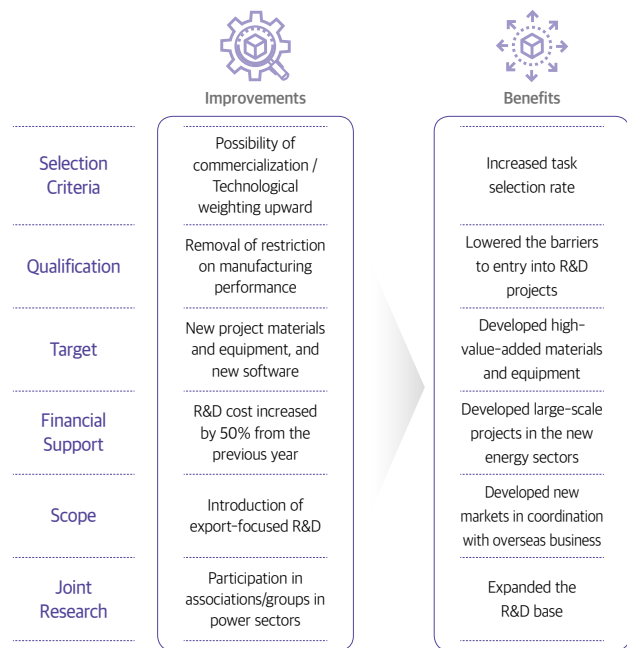
Technological Innovation Support for SMEs

At KEPCO, we provide R&D technology trends, financial support for R&D and sales channels to help SMEs improve their productivity and undertake cooperation R&D support projects through which they can purchase R&D products at a lower price. In 2017, we improved the system to ensure that more companies can benefit from the project and provide support for the entire business cycle from R&D to export.

Thanks to the new requirements, increased support, and introduction of export-focused R&D, we help them develop new markets and strengthen the base for their R&D projects. As a result, their sales grew by KRW 256.2 billion and we managed to reduce our purchase cost by KRW 167.8 billion.



R&D System Improvements



Strengthening Export Base for SMEs

Operation of KEPCO Trusted Partner (KTP)

KTP (KEPCO Trusted Partner) is a system that we designed to improve the overseas marketing performance of SMEs by granting the right to use the brand to promote export. We provide those selected as partners with prior access to various export support programs and opportunities to exhibit their products at the KEPCO Overseas Promotion Center, as well as office space, work facilities and local information. In 2017, we supported 99 power generation and new business companies, and second-tier suppliers and helped them to export worth USD 302 million.



KTP Certification emblem

Global Win-win Growth Expo 'BIXPO 2017'

KEPCO hosted BIXPO, the global energy expo in the power generation sector, for the third time. In 2017, we shared technology trends and directions for the future with more than 3,000 professionals from 47 countries under the slogan of 'Connect Ideas, Meet the 4th Revolution'. In particular, various programs such as new technology exhibition, international conference, international invention competition, CTO forum and win-win growth expo were organized and more than 70,000 visitors with 268 companies and research organizations attended. In addition, 190 cases of consultations worth USD 1.47 billion in exports

were organized between companies worldwide. In order to help SMEs with insufficient marketing resources to make their entry into the global market, we provided support for participation in the BIXPO, operated booths for exhibitions, and arranged one-on-one business meetings for them. As a result, they signed the contract to export products worth USD 11.26 million.



BIXPO attendees **268** companies

BIXPO Export consultations worth USD **1.47** billion



BUSINESS CASE

Expansion of Overseas Sales Channels for SMEs through Export Pilot Project

At KEPCO, we help SMEs to export products through export pilot projects. Through the project, their products are tested by importing countries and ordered for follow-up projects after performance verification.

In 2017, we increased the beneficiaries of our support and selected 3 countries in Southeast Asia and 6 new projects which are expected to benefit by economic stimulus due to rising oil prices in the Middle East through both internal and external reviews.

Export Pilot Project Overview

- Target companies** SMEs under the Framework Act on SMEs
- Target products** promising products in the power transmission/distribution, information, communication and new energy industries
- Areas of support** up to KRW 300 million including cash and products

Selection list of export pilot project

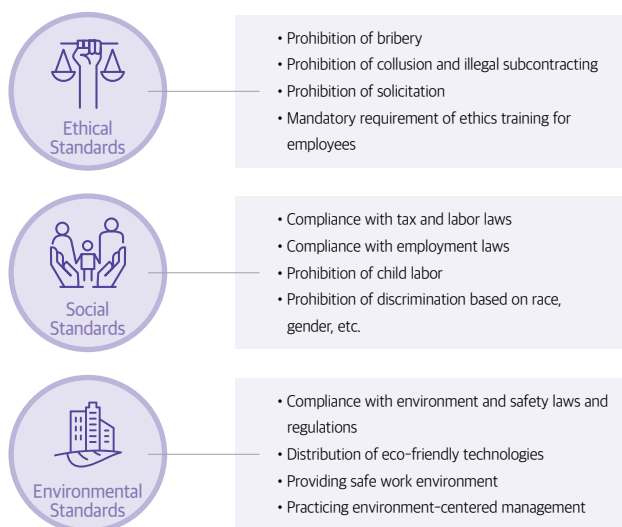
Project	Independent MG System Export Project	Indonesia Power Company PLN AMI Pilot Project	Distribution Panel Partial Discharge Detection System Development	Iran Power Corporation BEMS Development Using ESS	TADS (Thermography Auto Analysis Diagnosis System) Pilot Project	Kazakhstan GIS-based Distribution Management System Development
Target countries	Cambodia	Indonesia	Malaysia	Iran	Iran, Dominican Republic	Kazakhstan
Companies	I-CELL E&C Co., Ltd.	Tide Co., Ltd.	PS Technologies Co., Ltd.	I-CELL E&C Co., Ltd.	Tide Co., Ltd.	PS Technologies Co., Ltd.

Establishment of Fair Trade

Compliance with Suppliers' Code of Conduct

In 2012, we established the 'Suppliers' Code of Conduct', which reflects the 10 Principles of the UN Global Compact, and Labor and Environmental Guidelines of OECD and ILO for the first time in the public sector. By stating ethical, environmental and social standards in the Code of Conduct, we guide our suppliers to ensure compliance with the code in all contracts entered into with bidders.

Detailed Guidelines of Code of Conduct for Suppliers



Fair and Transparent Selection of Suppliers

At KEPCO, we established the 'Real-time Tender Information ALIO Management Disclosure System' which uploads tender announcements to ALIO for the first time in the public sector. Thanks to the system, we can disclose tender information in real time and prevent any omission in the information to ensure its transparency. We also re-established our SRM (Supplier Relationship Management) to share information through SMS and email in real time and manage the tender qualification of suppliers in a more transparent and fair manner.

Developing New Suppliers and Lowering Barriers to Entry

At KEPCO, we organize 'Presentation for Registration' and 'On-site Mentoring Program' on a regular basis to secure new suppliers. We provide SMEs with information about purchase forecast, registration

process, and technology/quality review standards to make the registration process easier for them. As a result, we secured new suppliers for 9 items from 45 companies in 2017. Furthermore, we lowered the barriers to entry for new/SMEs by reducing the requirements for product retention.

Support for Sustainable Win-win Growth

Suppliers CSR Evaluation

We operate a computerized system to evaluate the level of sustainability in the areas of economy, society and environment of suppliers and conduct on-site review of those with a high level of risk. For those who have violated the regulations, we apply restrictions on participating in tenders for a certain period of time based on the decision of the Disciplinary Committee.

Building Foundation for Win-win Growth

At KEPCO, we engage in various communication activities to improve our system and build a foundation for win-win growth with our suppliers. In order to ensure fair practice, we reviewed 44 cases of contract terms, construction regulations, guidelines, standards and special conditions and improved 18 of them to prevent unfair competition and excessive imposition of liabilities.

In addition, we identify areas of improvement through various communication channels and make necessary improvement. Through on-site open VOC activities and seminars with SMEs, we received 157 items for improvement and improved 77 of them.



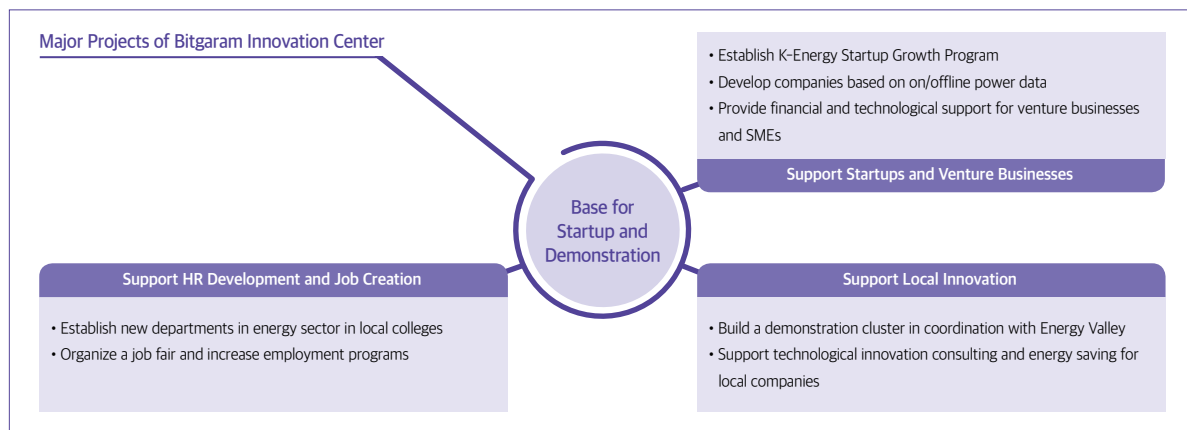
BUSINESS STORY

Fostering Youth Win-win Growth Supporters K-Energy Startup

As part of our support for youth startups and creating quality jobs in private sectors, we are increasing our investment in future-oriented business and developing prospective startups in order to build an ecosystem and growth engine in the new energy industry.

Building Startup Cluster through Bitgaram Innovation Center

In order to support startups and venture companies in the energy sector, we established Bitgaram Innovation Center ('Bitgaram Center') in February 2017. The Bitgaram Center was established to support and promote startups in the energy industry and create jobs through education programs, technological innovation of local companies, the development of projects specialized for local areas, and business school and expo. It also serves as a base in the energy sector as it coordinates with Energy Valley and other energy infrastructure in Gwangju and Jeonnam to support the ecosystem in the new energy industry.

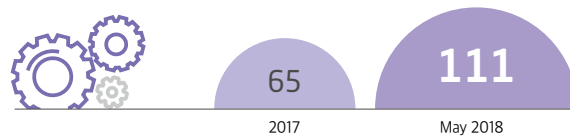


K-Energy Startup Development Program

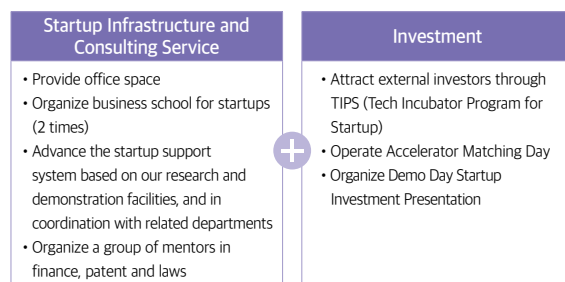
For the first time in the public sector, we established a startup support system and plan to support 300 companies over 5 years by 2020. Startups and SMEs with less than 7 years' operation selected for the program will be provided with financial support of up to KRW 200 million, office space at the Bitgaram Center, mentoring from experts, and access to the KEPCO Demonstration Test Center and patented technologies. As of May 2018, we selected 111 startups in total. We will further increase our support for startups in the new energy sector by matching the fund through the Win-win Growth Supporters Agreement.

K-Energy Startup Development Performance

(Unit: Company)



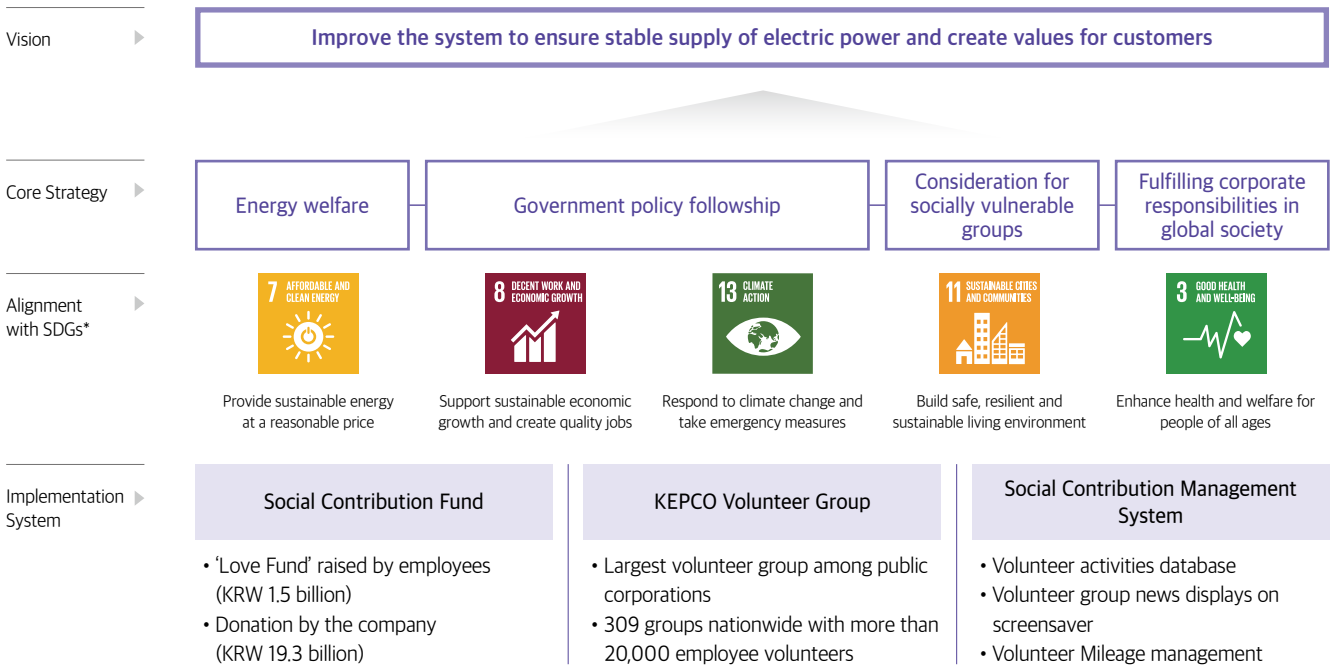
Plan to Support Energy Startups



Social Contribution System

Social Contribution Strategy

At KEPCO, we are fulfilling our social responsibilities by establishing the 4 Core Strategies and detailed strategic objectives and operating specialized social contribution programs. In addition, we established a strategy to expand our social contribution in line with our group's vision of 'protecting people's basic right to use energy and improving energy welfare' and organize Social Contribution Committee and quarterly meetings as part of our CSR programs.

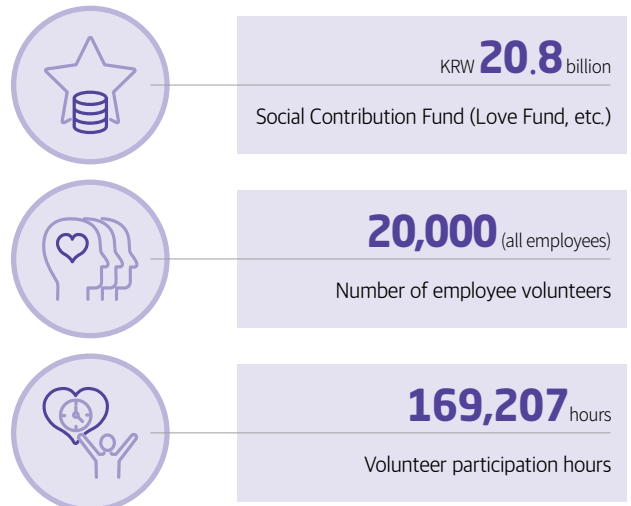


* Adopted by the UN member states in September 2015, the Sustainable Development Goals (SDGs) are goals that all countries around the globe are jointly working on to achieve. It consists of 17 goals and detailed tasks that are aimed at alleviating threats to sustainable development, such as economic and social polarization and climate change.

Social Contribution Implementation Process

Our social contribution fund is raised by monthly donations from employees known as 'Love Fund' and matched by the company. In 2017, we spent a social contribution fund of KRW 20.8 billion, double the amount of last year. In addition, we organized the largest volunteer group among public corporations (309 groups nationwide with more than 20,000 employee volunteers). We monitor our social contribution performance through social contribution management system and share information and feedback in real time with employees.

2017 Social Contribution Performance



Energy Welfare Campaign



SDG 7

Provide sustainable energy at a reasonable price



△ Social Enterprise Solar Power Plant Support



△ Energy of Love, Briquette Sharing





Sharing Happiness by Supporting Photovoltaic Power Facilities

'Photovoltaic Power Facility Support Project' is one of our key social contribution programs designed for social and economic organizations, social welfare facilities and the underprivileged. We support free construction of photovoltaic power facilities for social and economic organizations in rural areas and use the revenue generated from the facilities to create jobs. In addition, solar panels are installed free of charge in social welfare facilities and houses of the underprivileged to help them reduce their electricity cost. In 2017, we installed the facilities for 30 social companies and 150 households designated as social welfare facilities and the underprivileged.

Energy Welfare for the Vulnerable Population

At KEPCO, we believe that all people should be able to use energy regardless of their income, so we are committed to providing energy welfare support for the vulnerable population. With employee donations, we organized low-income family support projects to reduce their burden on electricity and delayed cutting electricity for households that failed to pay their electric bills as part of our basic energy rights protection program.

Total Energy Welfare Support Programs

 <p>Discount on Electric Bill</p>	<ul style="list-style-type: none"> • Financial support for electric bill for the underprivileged such as low-income facilities and people with disabilities • Selected the beneficiaries in coordination with the National Voucher* • KRW 483.1 billion for 2.85 million households
 <p>Support High Energy Efficiency facilities</p>	<ul style="list-style-type: none"> • Financed 50% of high-efficiency air conditioning facilities • Reduced energy cost and improved energy efficiency and eco-friendly consumption • KRW 100 billion for 80,000 social welfare facilities nationwide
 <p>Sharing energy with love</p>	<ul style="list-style-type: none"> • Financial support for electric bills to the underprivileged through employee donation and matching grant • KRW 300 million for 2,000 households
 <p>Energy of Love, Briquette Sharing</p>	<ul style="list-style-type: none"> • Donate and deliver briquettes to the underprivileged • Low CO₂ eco-friendly briquettes in response to climate change • KRW 1.2 billion, 2 million briquettes for 10,000 households

* National Voucher: subsidies to support welfare services such as medical care, childcare, education and culture for specific groups, beneficiaries can use the fund through Kukmin Haengbok Card after verification of their eligibility.

Social Value Creation through Win-win Growth



SDG 8
Support sustainable economic growth and create quality jobs



△ Support for Socioeconomic growth



△ Sinbaram Energy School

Support for Socioeconomic Growth

At KEPCO, we contribute to the socioeconomic growth of our country through customized support throughout the business lifecycle of establishment, growth and maturity. In 2017, we made an impact investment on the socioeconomic organizations in their maturity stage for the first time in the public sectors. We invest 100% in social projects and provide consultation for management. The profit will be distributed at a certain ratio and our investment and distributed profit will be reinvested. By doing so, we expect to create social values and profit while fostering social companies with strong competitive advantages.

Building Local Talent Development Infrastructure

At KEPCO, we are working on the establishment of KEPCO Tech based on the Energy Valley Academic-Industrial-Research Cluster to stimulate job market and boost local economy through investment in building infrastructure. In order to foster local talents in the energy sector and in response to the Energy Conversion, we established Sinbaram Energy School to provide more than 2,300 students in 14 middle schools in the Honam Region with opportunities to explore their career options. The program is designed to provide various programs including KEPCO headquarters and promotion center tour, career exploration in the energy sector, team projects and Energy Golden Bell and has been met with great enthusiasm by the participants.

Customized Support for Socioeconomic Organization by Business Cycle



Building Trust with Local Community

At KEPCO, we are engaging in various local community support activities in addition to creating values through economic growth. We are helping the farmers through the “1 Department for 1 Village” campaign and provide career experience and education support programs for local children’s centers. We also provide a cultural experience for our local

communities by playing films at “Bitgaram Movie Theater” while raising a total of KRW 48.15 million for “Local Community Charity Fund” as we donated KRW 3,000 for every movie viewer through “Counter of Love” in 2017.



BUSINESS CASE

Building a Foundation for Industrial Ecosystem for the Future through Energy Valley

Bitgaram Energy Valley is a global smart energy hub established to develop Gwangju Jeonnam into a region specialized for the new energy industry and promote balanced growth of our country. It was selected by the government to lead local economic growth for the new government project.

We focus on supporting and developing businesses and startups in the new energy sector through loan interest support, fund investment, sales channel benefits and stable human resource supply with the aim to attract investment for 500 companies, foster 3,000 professionals and create more than 30,000 jobs by 2020. In 2017, we made large-scale investments in establishing HVDC convergence clusters through global partnerships with GE, and supporting and fostering ICT companies.

Energy Valley Roadmap



Support for Investment Companies

(2017 performance)

Growth Support	Human Resource Support	R&D Support
<ul style="list-style-type: none"> • Loan interest support (KRW 147.4 billion) and fund investment for Energy Valley (KRW 51.5 billion) • Priority purchase for goods produced in special support areas (KRW 87.9 billion) • Support B2B trade for goods produced through Energy Valley Plaza 	<ul style="list-style-type: none"> • Customized human resource development programs (e.g. academic-industrial cooperation, development of skilled workers) • Dream System for long-term employment (incentive) system 	<ul style="list-style-type: none"> • Smart Energy City & Campus, underground distribution station • Establishment of SW Open Lab, New Energy Technology R&D Center, and Electric Research Sub-Centers

Energy Valley Performance

(As of May 2018, cumulative)

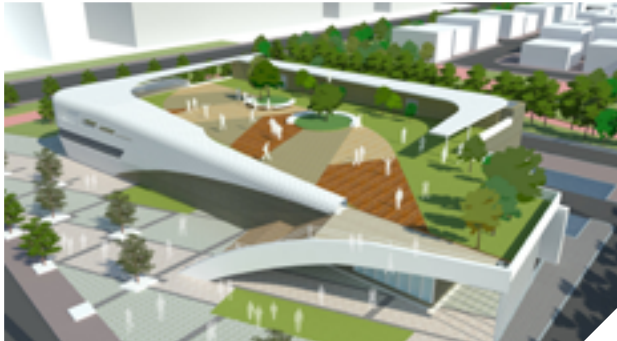
<p>Joined by 310 companies</p>	<p>Employed 8,142 people</p>	<p>Invested KRW 1,267.8 billion</p>
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Environmental Protection



SDG 13

Respond to climate change and take emergency measures



△ Han River Park Type Substation



△ Supported the PyeongChang Winter Olympics with electric vehicles

Green Management

To improve the quality of life for local residents and build our reputation as an eco-friendly corporation, we established a park substation on the side of the Han River. In addition, we supported the PyeongChang Winter Olympics by building eco-friendly power facilities such as underground distribution lines and indoor substation and providing electric vehicles and charging stations.

Carbon Management

For the first time in the public sector, we planted 30,000 trees in approximately 10ha of Gangwon-do and created 'KEPCO Forest with Participation of People' as part of our forest carbon offset project. In addition, we helped build 30 facilities for the reduction of particulate matters and prevent idling of buses while planting about 5,000 trees in 33 elementary schools nationwide through the Forestation Campaign for Children.

Building Social Safety Net



SDG 11

Build safe, resilient and sustainable living environment

KEPCO119 Rescue Team

Since 2010, we have operated the KEPCO 119 Rescue Group, the only disaster rescue organization in the public sector. The group consists of 3 teams including Life Saving, Medical Support and On-site Support Teams in 6 regions nationwide and we strengthen our emergency response through advanced training. In 2017, we provided emergency medical services for the PyeongChang Winter Olympics, and disaster recovery support for heavy rain in Chungbuk and earthquake in Pohang.



△ KEPCO 119 Rescue Group

Social Contribution by Lifecycle

At KEPCO, we engage in social contribution activities for various groups including children/adolescents, college students/youth, senior citizens/underprivileged. For children and adolescents, we organized campaigns for missing children and a 'Bitgaram Electricity Class' for electrician training at juvenile detention centers. Also for college students and youths, we run a 'Power Class' to provide

educational support for middle-school students through scholarship programs, and operate an overseas volunteer group. We also offer location services for people with dementia using wearable devices and healthcare service for senior citizens living alone. We provide eyesight recovery surgeries to low-income patients, who are in danger of blindness, and operate total energy welfare programs to protect people's right to use energy.

Global Social Contribution



SDG 3
Enhance health and welfare for people of all ages



△ Overseas volunteer program



△ Eye Love Project

Overseas Employee Volunteer Program

To promote value of sharing and fulfill our social responsibility as a global corporate citizen, we dispatched 90 employee volunteers to Sri Lanka and Mongolia in 2017. We built playgrounds and sports facilities, painted the walls, repaired schools and libraries, supported classes for children through Korean culture classes, and organized sporting events for children.

experience to students who will lead the future of Korea, which is a win-win situation on the global stage, to feel the importance of living together.

Overseas College Student Volunteer Program

In 2017, we selected 90 college students and sent 30 students to each of three developing countries - Indonesia, Cambodia, and Mongolia. As part of our global social responsibility program, we repaired school and public facilities, and provided support for building local photovoltaic systems in underdeveloped countries. In particular, we provided valuable

Global Sharing of Light Campaign

We organized 'Eye Love Project (Presenting the Light of the World)' where we provided eye surgery for people from low-income families who are losing their vision. In 2017, we provided medical treatment for 1,828 people and arranged surgery for 495 patients in three countries including Nigeria as part of the 'Light of the Dream and Hope' campaign.

BUSINESS STORY

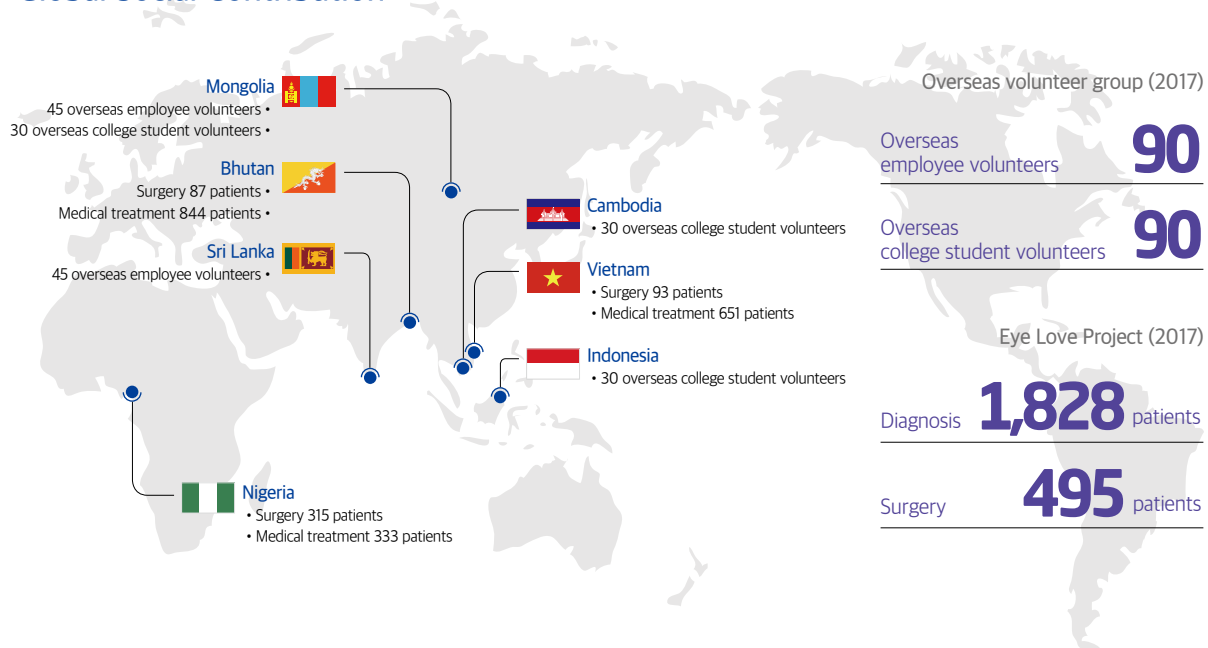
KEPCO's Social Contribution at a Glance

At KEPCO, our social contribution activities are divided into Social Contribution by Lifecycle, Global Social Contribution and Win-win Growth with Local Community. We will continue to fulfill our social responsibility and share happiness with people by building a social safety net and supporting sustainable growth of local community.

Win-win Growth with Local Community



Global Social Contribution



KEPCO Social Contribution in Consideration of Lifecycle

Children and Youths



Missing Children Prevention Campaign

Distributed children's name tags and bands at the event venues

Financial support KRW **200** million



Missing Children Search Campaign

Posted ads on electric bills

3 children per month



Bitgaram Electricity Class

Helped youths in juvenile detention centers adapt to society through electrician certification support

Financial support: KRW **100** million

College Students and Young Adults



Power Class

Provided scholarships for college students and educational support for middle-school students from low-income families

50 scholarship recipients

scholarship fund KRW **200** million



Overseas College Student Volunteer Group

Dispatched college student volunteers in three Southeast Asian countries to support building photovoltaic power facilities, electricity science class, and talent donation

90 volunteers

Senior Citizen and Underprivileged



Location service for senior citizens with dementia

Provided healthcare and location service for demented senior citizens and their guardians using wearable devices

50 senior citizens

financial support KRW **200** million



Electric Bill Support for Low-income Families

Total energy welfare support program to protect people's right to use energy

Electric bill discount for **2.85** million households / KRW **483.1** billion

Love Energy Sharing support **2,000** households / KRW **300** million



Eye Love Project 'Sharing Lights of the World'

Provided eye surgery and medical treatment for patients from low-income families (Lights of the World)

Domestic **100** patients
overseas **2,323** patients



Homecoming support for multicultural families

Helped multicultural families visit foreign spouse's home country to provide information about the countries

100 beneficiaries
financial support KRW **200** million

SPECIAL STORY

Supporting the 2018 PyeongChang Winter Olympics

2018 PyeongChang Winter Olympics (Feb. 9-25) and Paralympic Winter Games (March 9-18) were successfully held thanks to support from KEPCO and the citizens.



Zero-fault electric power supply

Olympics Power Facilities and Infrastructure

Since 2015, we have invested a total of KRW 150.9 billion to build and upgrade 154-kV (kilovolt) substations, transformers, transmission and distribution lines. From November 2016 to March 2017, we conducted 22 tests to improve our power supply capabilities for the Olympics.

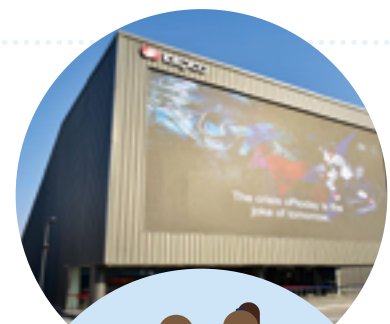
ICT System Operation

At our headquarters and regional office in Gangwon, we operated a control center with 238 personnel for 24 hours a day. In particular, we built a state-of-the-art power ICT system to monitor electric power facilities for the Olympics in real time.

KEPCO PR Center

Promoting the Future Smart Energy City

We operated 'KEPCO PR Center' to provide visitors from all over the world with opportunities to experience the Future Smart Energy City using VR technology and multimedia shows. The center consists of the main show area, VR experience area, and power group promotion area to provide video shows and experiences. The visitors enjoyed the VR experience in particular as they experienced off-shore wind, solar power, and electric vehicle infrastructures as athletes competing for biathlon and alpine skiing at the Winter Olympics.



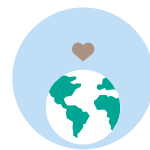


For the first time in public sector, we supported the PyeongChang Winter Olympics as an official sponsor (Tier 1 Sponsor) and contributed to the successful hosting of the event without any power failure as we showcased our superior technological expertise.

Eco-friendly/Safe Olympics

Eco-friendly Olympics

We provided 150 electric vehicles for free hire service and 26 quick charging stations during the Olympics to reduce GHG emissions.



96.8 tons
CO₂ reduction



150 cars
electric vehicles for free hire service



Emergency medical support by KEPCO 119 Rescue Group

KEPCO119 Rescue Group consisting of our employees provided emergency medical services at major events including alpine ski, cross country, and bobsleigh.

Encouraging Promotion and Participation for Olympics

Creating Atmosphere for Successful Hosting of Olympics

We posted our Olympics support messages on more than 3,000 KEPCO vehicles nationwide and electric bills to promote the Olympics. We also invited more than 100 personages from more than 10 countries in the energy and power sectors for the opening ceremony, competitions and power infrastructure tour program.

Support for the Socially Vulnerable Groups

We invited more than 1,000 people from the vulnerable groups to the PyeongChang Olympic and Paralympic Games.





Appendix



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Sustainability Data

Economy

Consolidated statements of financial position

(Unit: KRW million)

Description	55 th ('15.1.1~'15.12.31)	56 th ('16.1.1~'16.12.31)	57 th ('17.1.1~'17.12.31)
Current assets	22,025,325	19,708,526	19,141,707
Non-current assets	153,232,034	158,128,516	162,647,208
Total assets	175,257,359	177,837,042	181,788,915
Current liabilities	22,710,842	24,739,226	23,424,281
Non-current liabilities	84,604,042	80,047,271	85,399,993
Total liabilities	107,314,884	104,786,497	108,824,274
Paid-in capital	4,053,578	4,053,578	4,053,578
Retained earnings	48,187,241	53,173,871	53,370,558
Other components of equity	14,393,648	14,496,244	14,257,309
Equity attributable to owners of the parent	1,308,008	1,326,852	1,283,196
Non-controlling interest	67,942,475	73,050,545	72,964,641

Consolidated income statement

(Unit: KRW million)

Description	55 th ('15.1.1~'15.12.31)	56 th ('16.1.1~'16.12.31)	57 th ('17.1.1~'17.12.31)
Sales	58,957,722	60,190,384	59,814,862
Cost of sales	45,457,729	45,549,553	52,098,855
Gross profit	13,499,993	14,640,831	7,716,007
Selling and administrative expenses	2,153,261	2,639,232	2,762,855
Operating profit	11,346,732	12,001,599	4,953,152
Other income	432,219	412,887	390,145
Other expenses	108,848	188,624	180,055
Other profit (loss)	8,610,773	70,498	156,627
Finance income	1,182,988	791,543	1,530,618
Finance costs	3,015,457	2,437,087	3,127,952
Other comprehensive profit or loss of associates	207,379	(137,348)	(108,317)
Profit before income tax	18,655,786	10,513,468	3,614,218
Income tax expense	5,239,413	3,365,141	2,172,824
Net income	13,416,373	7,148,327	1,441,394
Other comprehensive income	34,006	(2,302)	(94,716)
Total comprehensive income	13,450,379	7,146,025	1,346,678

Creating economic value (based on separate figures)

(Based on separate figures)

Description	Unit	2015	2016	2017
Power sales	GWh	483,655	497,039	513,223
Power sales revenue	KRW billion	58,540.4	60,289.6	59,965.8
Operating profit	KRW billion	4,425.4	4,881.5	1,553.6
Profit for the period	KRW billion	10,165.7	4,262	1,506.8

Company value (based on the closing price for the period)

(Based on the closing price of the year)

Description	Unit	2015	2016	2017
Stock price	KRW	50,000	44,050	38,150
Market price	KRW billion	32,098.2	28,278.5	24,490.9
Credit rating	Moody's	Aa2 Stable	Aa2 Stable	Aa2 Stable

Distributing economic value

(Unit: KRW billion)

Description		2015	2016	2017
Shareholders (Dividends)	Total	1,990.1	1,271.1	507.2
	Government	362.2	231.3	92.3
	General	1,004.7	649.1	261.5
	Foreigners	623.2	390.7	153.3
	Dividend rate (%)	62	39.6	15.8
KEPCO Group power generation companies (Power purchase cost)		43,218.5	43,231.9	43,440.4
Creditors (Interest expense)		1,092.6	844.2	738
Donations		15.1	22.8	28.4
Purchase of products produced by SMEs		5,825.9	5,268.4	6,391.6
Employees	Total	1,890.1	2,138.8	2,152.9
	Salaries	1,532.5	1,674.5	1,670.9
	Retirement benefits	153.7	180.9	178.7
	Employee benefits	203.9	283.5	303.3

Economy Sector Goal

Classification	Goal for 2017	Achievement in 2017	Goal for 2018	Mid- to long-term goal for 2020
Blackout time (minute/household)	9.34	9.08	8.84	7.92
Capacity of electric power facilities completed for overseas businesses (MW)	5,338	6,195	5,568	6,138
Secure core strategic technologies (Case, accumulated)	69	69	89	134
Liabilities rate (%)	91.6	91	102	111.8

Sustainability Data

Environment

Use of materials

(Unit: Ton)

Classification	2015	2016	2017
Concrete	602,605	659,404	224,644
Metal	103,597	79,656	17,130
Ceramics	68	108	10
Power lines	42,586	44,505	15,464
Others	13,430	14,956	5,594
Total	762,286	798,629	262,842

Eco-friendly cars among business purpose vehicles

Classification	Unit	2015	2016	2017
Cars for Business	No. of Cars	1,843	1,937	2,151
Eco-friendly cars (including compact cars)		1,603	1,700	1,936
Compact cars		1,312	1,243	1,130
Hybrid vehicles		146	142	142
Electric vehicles		145	315	664
Percentage of eco-friendly cars	%	87	87.8	90.0

Generation and recycle of wastes by type

Category	2015		2016		2017	
	Generation (Ton)	Generation (Ton)	Generation (Ton)	Recycling (Ton)	Recycling rate (%)	
Concrete	51,561	65,807	18,867	14,783	78.4	
Metal	22,449	24,164	6,617	6,147	92.9	
Ceramics	23	47	7	3	42.9	
Power lines	6,254	7,246	2,343	2,022	86.3	
Others	1,890	2,773	876	597	68.2	
Total	82,177	100,037	28,710	23,552	82.0	

Purchase of green products and purchase percentage

(Unit: KRW million, %)

2015			2016			2017		
Total	Green products	Percentage	Total	Green products	Percentage	Total	Green products	Percentage
16,575	15,574	94	26,351	25,344	96.2	26,703	25,093	94.0

Energy

(Unit: TJ)

Classification	2015	2016	2017
Consumption	5,995	6,425	6,554

Performance of the emissions trading scheme*(Unit: 10,000 tCO₂eq)

Classification	2015	2016	2017
Allocation	111	231 ¹⁾	91
Emissions ²⁾	130.9	139.8	147.5

* Emission coefficient and methodology: "Guidelines on Emission Report and Certification for Greenhouse Gas Emission Trading System" were applied.

¹⁾ Include additional quota of 1.43 million tons of CO₂eq due to the early reduction performance during 2011-2013.

²⁾ Any excess or reduction of emission is adjusted through purchase of carbon emission rights or borrowing/deferment of the quota from/to the following year.

Greenhouse gas emissions and emission intensity(Unit: 10,000 tCO₂eq for emissions; ton/KRW 100 million for intensity)

Classification	2016		2017	
	Emissions	Intensity	Emissions	Intensity
Scope 1	123	2.03	129	2.15
Scope 2	17	0.29	18.4	0.3

(Unit: ton CO₂eq)

Classification	2017					
	Purchased goods and services	Fuel and energy related activities	Upstream transportation and distribution	Waste generated in operations	Business travel	Employee commuting
Scope 3	47,984,469	228,357,827	6	1,099	14,333	464

Air pollutants (Including KEPCO Group power generation companies)

(Unit: g/MWh)

Classification	2015	2016	2017
SOx	165	156	138
NOx	266	246	177
Dust	8	7	7

Environment Sector Goal

Classification	Goal for 2017	Achievement in 2017	Goal for 2018	Mid- to long-term goal for 2020
Transmission and distribution loss factor (%)	3.72	3.57	3.716	3.716
Rate of undergrounding electric distribution lines (%)	17.6	17.7	18.3	21 or more
Renewable energy capacity (MW)	198	198	191	542

Sustainability Data

Social

Workforce

(Unit: Person)

Classification	2015	2016	2017
Number of employees	20,620	21,544	22,196
By employment type			
Regular employees	20,196	20,957	21,627
Employees under unlimited contracts	10	1	0
Non-regular employees	414	586	569
By gender			
Male	16,926	17,563	17,918
Female	3,694	3,981	4,278
By age			
Under 30 years of age	2,433	3,369	4,203
Aged 30-40	4,920	4,832	4,631
Over 40 years of age	13,267	13,343	13,362
Newly hired	1,041	1,433	1,574
Retirees	774	681	802

Employee trainings

(Unit: Person)

Classification	2015	2016	2017
Senior executives	2,302	2,923	3,369
Junior executives	5,750	9,059	9,253
Staff	5,849	20,981	26,050

Training hours per employee

(Unit: Hours)

Classification	2015	2016	2017
Training hours per employee	80.7	81.6	86.4

Maternity protection system operation performance

Classification	Unit	2015	2016	2017
Parental leave before or after childbirth	Person	149	139	114
Childcare leave (Male)		336 (36)	310 (41)	328 (36)
Infertility leave		22	22	12
Reduced work hours for childcare		12	22	10
Return rate after parental leave (Male)	%	95 / 98.3	100 / 96.8	90.9 / 98.2
Work rate of more than 1 year after parental leave		98	97.3	97

Labor union membership status

Classification	Unit	2015	2016	2017
Labor union status	Person	20,705	21,449	22,125
Labor union membership rate	%	72.46	72.66	71.80

* The issues discussed and decided at the Labor union apply to all employees

Accident of outsourced construction projects

Classification	Unit	2015	2016	2017
Accident rate ¹⁾	%	0.37	0.24	0.28
Fatality rate per 10,000 persons ²⁾	0/000	1.00	1.18	1.80

¹⁾ Accident rate = (Number of casualties/Regular employees) x 100

²⁾ Fatality rate per 10,000 persons = (Number of the death/Regular employees) x 10,000

Purchase of products produced by SMEs

(Unit: KRW billion)

Classification	2015	2016	2017
Purchase	5,825.9	5,268.4	6,391.6

Major suppliers* in 2017

(Unit: Company)

Classification	Number of registered items	Number of registered companies
Transmission and substation	146	511
Distribution	91	886
Information and communication	4	6
Total	241	1,403

* Characteristics of Suppliers

We register companies that produce and supply materials and equipment with major impacts on the quality and stability of power based on reviews of their qualities and processes, and manage and operate them.

- Status of suppliers: first-tier: 1,149 companies, second-tier: 12,706 companies

- Major areas of business: production of materials and equipment in the electrical power sector (e.g. cable, switch)

Social Sector Goal

Classification	Goal for 2017	Achievement in 2017	Goal for 2018	Mid- to long-term goal for 2020
Rate of preferential purchase of products manufactured by SMEs (%)	70.7	72.1	70.8	70.9
Safety accident victims (person)	94	74	72	58
Number of companies attracted into the Bitgaram Energy Valley (company)	250	280	300	500

Independent Assurance Statement

Introduction

Korea Electric Power Corporation (“KEPCO”) commissioned DNV GL Business Assurance Korea, Ltd. (“DNV GL”), part of DNV GL Group, to undertake independent assurance of KEPCO 2018 Sustainability Report (the “Report”). KEPCO have sole responsibility for the preparation of the Report. The responsibility of DNV GL in performing the assurance work is to the management of KEPCO in accordance with the terms of reference. DNV GL’s assurance engagements are based on the assumption that the data and information provided by KEPCO for our review have been prepared in good faith.

Scope of assurance

The scope of assurance includes a review of sustainability activities and non-financial performance data over the reporting period from 1st January to 31st December 2017. This also includes;

- Evaluation of the Report on the adherence to the reporting principles for defining report content and the reporting principles for defining report quality set forth in the Global Reporting Initiative (GRI) Sustainability Reporting Standards.
- Review of the process for determining material topics for reporting and the management approach to material topics and the process for generating, gathering and managing the quantitative and qualitative data in the Report.

Basis of our opinion

The assurance engagement was planned and carried out using DNV GL’s assurance methodology VeriSustain^{TM1}, which is based on our professional experience, international assurance best practice including International Standard on Assurance Engagements 3000 (ISAE 3000). We provided the limited level of assurance. The assurance engagement was carried out in June 2018 and the site visits were made to KEPCO’s headquarters in Naju, Jeollanam-do, Republic of Korea. We undertook the following activities as part of the assurance process:

- challenged the sustainability-related statements and claims made in the Report and assessed the robustness of the underlying data management system, information flow and controls;
- interviewed representatives from the various departments;
- reviewed documents, sampled data, externally disclosed reports;

- reviewed the materiality assessment report.

Limitations

The engagement excludes the sustainability management, performance and reporting practices of KEPCO’s six subsidiaries (Korea Hydro & Nuclear Power, Korea South-East Power, Korea Midland Power, Korea Western Power, Korea Southern Power, and Korea East-West Power), associated companies, suppliers, contractors and any third-parties mentioned in the Report. DNV GL did not interview external stakeholders as part of this Assurance Engagement. The consolidated financial statements and the announcement disclosed at the website of Korea Financial Supervisory Service (<http://dart.fss.or.kr>), the website of Public Management Information System (ALIO; www.alio.go.kr) and KEPCO’s website (www.kepco.co.kr) are not included in the assurance scope. Limited depth of evidence gathering were applied including inquiry and analytical procedures and limited sampling at lower levels in the organization. Economic performance based on the financial data is cross-checked with internal documents and the audited consolidated financial statement. The baseline data for Environmental and Social performance are not verified, while the aggregated data at the corporate level are used for the verification. DNV GL expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

Conclusion

On the basis of the work undertaken, nothing comes to our attention to suggest that the Report is not prepared ‘in accordance’ with GRI Standards – Core option. Further opinions with regards to the adherence to the following Principles in the GRI Standards are made below:

Stakeholder Inclusiveness

KEPCO has identified internal and external stakeholder groups such as citizens/customers, local communities, shareholders, the government/ National Assembly, mass media, academia/experts, domestic partners, overseas partners, employees, and the labour union. KEPCO engages with the stakeholders through various channels to understand respective stakeholder groups’ interests and expectations. The communication channels, major expectations and concerns from stakeholder groups, actions to share core values and KEPCO’s corresponding responses are described in the Report.

¹ The VeriSustain protocol is available upon request at DNV GL website (www.dnvgl.com)

Sustainability Context

The Report addresses KEPCO's vision, core value, the mid- and long-term strategy, strategic objectives and value chain. In addition, the Report describes management approaches for the 5 main material topics together with relevant business risks and opportunities and performances in 2017. The Report enables the stakeholders to understand KEPCO's sustainability management.

Materiality

KEPCO has conducted materiality assessment to prepare the Report. The relevant 34 issues were derived by analysing peers' reports, media research and the topics covered in various global initiatives and standards etc. The issues are prioritized by taking into account the stakeholders' interest and business impact on KEPCO. Subsequently KEPCO has grouped the prioritized 10 material issues into 5 main topics. The level of stakeholders' interest was measured on the survey with stakeholders (clients, employees, business partners, local communities and sustainability advisory agencies etc.). The business impact was estimated based on the frequencies and the extent of the relevant 34 issues addressed in the various global initiatives and standards, peers' reports and the mass media. The assurance team has reviewed the materiality assessment process and nothing comes to our attention that would cause us to believe that material topics identified from the assessment are not reported.

Completeness

The Report has covered the sustainability management approach and sustainability performances of KEPCO for the reporting period. The reporting boundary has been set for KEPCO's domestic workplaces including the headquarters in Naju, Republic of Korea. However, the report includes the environmental investment costs and weight of air pollutants and water pollutants from six power generation companies (Korea Hydro & Nuclear Power, Korea South-East Power, Korea Midland Power, Korea West Power, Korea South Power and Korea East Power) in which KEPCO has 100% stake. The assurance team noted that the performance results associated with the material topics were reported within the reporting boundary.

Further opinions on the report quality is as follows;

Report quality: Accuracy, Balance, Clarity, Comparability, Reliability and Timeliness

DNV GL verified the data and information based on sampling methodology during the verification process. The verification team interviewed the responsible individuals, reviewed the process of gathering and processing data and information, and the supporting documents and records. Relevant information and performances in the Report can be compared on a year-to-year basis. The report is published yearly on a regular schedule. Based on sampling verification and other reported information and available evidence, nothing comes to our attention that would cause us to believe that the data and information presented in the Report have any intentional error or material misstatement.

Competence and Independence

DNV GL applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021:2011 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We have complied with the DNV GL Code of Conduct² during the assurance engagement and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV GL was not involved in the preparation of statements or data included in the report except for this Assurance Statement. DNV GL maintains complete impartiality toward stakeholders interviewed during the assurance process. During 2017~2018, DNV GL has not provided any services which could be considered as a conflict of independence or impartiality.

June 29 2018
Seoul, Korea



In Kyoon Ahn

Country Representative

DNV GL Business Assurance Korea, Ltd.

GRI Content Index

General Disclosures

Classification	Disclosure	Indicators	Page	Note
GRI 102: Organizational Profile	102-1	Name of the organization	8	
	102-2	Activities, brands, products, and services	8	
	102-3	Location of headquarters	8	
	102-4	Location of operations	Domestic, 40, 41	
	102-5	Ownership and legal form	8	
	102-6	Markets served	Domestic, 40, 41	
	102-7	Scale of the organization	8, 78, 79	
	102-8	Information on employees and other workers	82	
	102-9	Supply chain	83	
	102-10	Significant changes to the organization and its supply chain	-	Annual Report 549, 550p
	102-11	Precautionary Principle or approach	20, 21	
	102-12	External initiatives	66~71	UN SDGs
	102-13	Membership of associations	91	
	102-14	Statement from senior decision-maker	4, 5	
	102-16	Values, principles, standards, and norms of behavior	18	
	102-17	Mechanisms for advice and concerns about ethics	18	
	102-18	Governance structure	14	
	102-22	Governance structure of the organization, including committees of the highest governance body	17	
	102-23	Chairman of highest governance body	14	
	102-25	Conflicts of interest are avoided and managed	15	
	102-25	Group knowledge of the highest governance body	15	
	102-35	Remuneration policies	17	
	102-40	List of stakeholder groups	22, 23	
	102-41	Collective bargaining agreements	83	
	102-42	Identifying and selecting stakeholders	22, 23	
	102-43	Approach to stakeholder engagement	22, 23	
	102-44	Key topics and concerns raised	22, 23	
	102-45	Entities included in the consolidated financial statements	-	Annual Report 548, 549p
	102-46	Defining report content and topic Boundaries	24, 25	
	102-47	List of material topics	25	
	102-48	Restatements of information	-	Reported in each page
	102-49	Changes in reporting	2	
102-50	Reporting period	2		
102-51	Date of most recent report	2		
102-52	Reporting cycle	2		
102-53	Contact point for questions regarding the report	2		
102-54	Claims of reporting in accordance with the GRI Standards	2		
102-55	GRI content index	86~89		
102-56	External assurance	84, 85		

Classification	Disclosure	Indicators	Page	Note
GRI 103: Management Approach	103-1	Material Topic and its boundary	25	
	103-2	Management Approach and its Components	87, 88	
	103-3	Evaluation of management method	87, 88	

Material Topics

Economic Performance (GRI 200)

Classification	Disclosure	Economic Performance (GRI 200)	Page	Note
GRI 203: Indirect Economic Impacts	103-1, 2, 3	Management Approach	34, 58	
	203-1	Infrastructure investments and services supported	69, 74	
	203-2	Significant indirect economic impacts	47, 53, 67, 69	
GRI 205: Anti-corruption	103-1, 2, 3	Management Approach	18	
	205-2	Communication and training about anti-corruption policies and procedures	18, 19	We do not manage the number of ethics management committee members who communicate anti-corruption policies / procedures by region. We conduct ethics management training for 2,507 employees in suppliers. (Although we do not manage all suppliers number, we plan to implement data management in the future.)

Environmental Performance (GRI 300)

Classification	Disclosure	Indicators	Page	Note
GRI 302: Energy	103-1, 2, 3	Management Approach	42	
	302-1	Energy consumption within the organization	81	
	302-2	Energy consumption outside of the organization	81	
	302-4	Reduction of energy consumption	43-46	
	302-5	Reductions in energy requirements of products and services	43, 44	
GRI 305: Emission	103-1, 2, 3	Management Approach	42	
	305-1	Direct (Scope 1) GHG emissions	81	
	305-2	Indirect (Scope 2) GHG emissions	81	
	305-4	GHG emissions intensity	81	
	305-5	Reduction of greenhouse gas (GHG) emissions	43-46	
	305-6	Emissions of ozone-depleting substances	81	

GRI Content Index

Social Performance (GRI 400)

Classification	Disclosure	Indicators	Page	Note
GRI 403:	103-1,2,3	Management Approach	48	
Occupational Health and Safety	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	54, 83	We do not manage data by gender / region, but we plan to manage data in the future.
GRI 412:	103-1,2,3	Management Approach	48	
Human Rights Assessment	412-2	Employee training on human rights policies or procedures	57	
GRI 413:	103-1,2,3	Management Approach	48	
Local Community	413-1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	45, 66-73	

Electric utility sector supplement

Classification	Disclosure	Indicators	Page	Note
Organizational profile	103-1,2,3	Management Approach	81	
	EU5	Allocation of CO ₂ e emissions allowances or equivalent, broken down by carbon trading framework	81	
R&D	103-1,2,3	Management Approach	28	
	EU8	Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development	32	
Employment	103-1,2,3	Management Approach	48	
	EU16	Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors	54, 55	
Employment	103-1,2,3	Management Approach	48	
	EU18	Percentage of contractor and subcontractor employees that have undergone relevant health and safety training	54	
Access	103-1,2,3	Management Approach	34	
	EU23	Programs, including those in partnership with government, to improve or maintain access to electricity and customer support services	35, 36	
Provision of information	103-1,2,3	Management Approach	34	
	EU24	Practices to address language, cultural, low literacy and disability related barriers to accessing and safely using electricity and customer support services	59, 67	

General Topics

Economic Performance (GRI 200)

Classification	Disclosure	Indicators	Page	Note
GRI 201: Economic Performance	201-1	Direct economic value generated and distributed	79	
	201-2	Financial implications and other risks and opportunities due to climate change	43	
GRI 205: Anti-corruption	205-1	Operations assessed for risks related to corruption	18, 19	
	205-3	Confirmed incidents of corruption and actions taken	18, 19	
GRI 206: Anti-competitive Behaviour	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	-	No such cases

Environmental Performance (GRI 300)

Classification	Disclosure	Indicators	Page	Note
GRI 301: Materials	301-1	Materials used by weight or volume	80	
	301-2	Percentage of materials used that are recycled input materials	80	
GRI 304: Biodiversity	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	45	
	304-2	Significant impacts of activities, products, and services on biodiversity	45	
	304-3	Habitats protected or restored	45	
GRI 306: Effluents and Waste	306-1	Water discharge by quality and destination	44	
	306-2	Waste by type and disposal method	80	
	306-3	Significant spills	-	No such cases
GRI 307: Environmental Compliance	307-1	Non-compliance with environmental laws and regulations	-	No such cases

Social Performance (GRI 400)

Classification	Disclosure	Indicators	Page	Note
GRI 401: Employment	401-1	New employee hires and employee turnover	82	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	51	
	401-3	Parental leave	82	
GRI 403: Occupational Health and Safety	403-1	Workers representation in formal joint management-worker health and safety committees	54	
	403-3	Workers with high incidence or high risk of diseases related to their occupation	54	
	403-4	Health and safety topics covered in formal agreements with trade unions	54	
GRI 404: Training and Education	404-1	Average hours of training per year per employee	82	
	404-2	Programs for upgrading employee skills and transition assistance programs	50	
GRI 405: Diversity and Equal Opportunity Non-discrimination	405-1	Diversity of governance bodies and employees	14, 82	
	405-2	Female basic salary and compensation ratio compared to male	-	Same as men and women salary
GRI 416: Customer Health and Safety	416-1	Safety and Health Impact Assessment of Products and Services	35	
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	-	No such cases
GRI 417: Marketing and Labeling	417-1	Requirements for product and service information and labeling	59, 61	
	417-2	Incidents of non-compliance concerning product and service information and labeling	-	No such cases
	417-3	Incidents of non-compliance concerning marketing communications	-	No such cases
GRI 418: Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	-	No such cases
GRI 419: Socioeconomic Compliance	419-1	Non-compliance with laws and regulations in the social and economic area	-	No such cases

Major Subsidiaries

Power generation companies

Korea Hydro & Nuclear Power Co., Ltd. Ownership 100%	<ul style="list-style-type: none"> • Address 1655, Bulguk-ro, Yangbuk-myeon, Gyeongju-si, Gyeongsangbuk-do • Sales KRW 9,415,751 million • Total assets KRW 55,011,096 million • Home page www.khnp.co.kr 	It is the only company in Korea that operates nuclear power plants, and also operates hydropower and pumped storage power plants. <ul style="list-style-type: none"> • Production 153,578GWh • Power generation 146,207,009MWh
Korea South-East Power Co., Ltd. Ownership 100%	<ul style="list-style-type: none"> • Address 32, Sadeul-ro 123beon-gil, Jinju-si, Gyeongsangnam-do • Sales KRW 5,387,846 million • Total assets KRW 9,879,577 million • Home page www.koenergy.kr 	Operates five power plants: Yeongheung Power Division, Samcheonpo Power Division, Yeongdong Eco Power Division, Yeosu Power Division, and Bundang Power Division. <ul style="list-style-type: none"> • Production 70,632GWh • Power generation 66,638,482MWh
Korea Midland Power Co., Ltd. Ownership 100%	<ul style="list-style-type: none"> • Address 160, Boryeongbuk-ro, Boryeong-si, Chungcheongnam-do • Sales KRW 4,167,009 million • Total assets KRW 9,893,822 million • Home page www.komipo.co.kr 	Operates six power plants: Boryeong Power Division, Incheon Power Division, Seoul Construction Division, Shinboryeong Power Division, Jeju Power Division, and Sejong Power Division. <ul style="list-style-type: none"> • Production 47,150GWh • Power generation 50,255,546MWh
Korea Western Power Co., Ltd. Ownership 100%	<ul style="list-style-type: none"> • Address 285, Jungang-ro, Taeon-eup, Taeon-gun, Chungcheongnam-do • Sales KRW 4,199,079 million • Total assets KRW 9,660,426 million • Home page www.westernpower.co.kr 	Operates four power plants: Taeon Power Division, Peyongtaek Power Division, Seoinchon Power Division, and Gunsan Power Division. <ul style="list-style-type: none"> • Production 47,936GWh • Power generation 45,464,909MWh
Korea Southern Power Co., Ltd. Ownership 100%	<ul style="list-style-type: none"> • Address 40, Munhyeongeumyung-ro, Nam-gu, Busan • Sales KRW 4,397,552 million • Total assets KRW 9,648,741 million • Home page www.kospo.co.kr 	Operates seven power plants: Hadong Power Division, Shinincheon Power Division, Busan Power Division, Namjeju Power Division, Yeongwol Power Division, Andong Power Division, and Samcheok Power Division. <ul style="list-style-type: none"> • Production 49,014GWh • Power generation 47,659,952MWh
Korea East-West Power Co., Ltd. Ownership 100%	<ul style="list-style-type: none"> • Address 395, Jongga-ro, Jung-gu, Ulsan • Sales KRW 4,644,330 million • Total assets KRW 8,855,518 million • Home page www.ewp.co.kr 	Operates five thermal power plants: Ilsan Thermal Power Division, Dangjin Thermal Power Division, Honam Thermal Power Division, Ulsan Thermal Power Division, and Donghae Bio Thermal Power Division. <ul style="list-style-type: none"> • Production 50,802GWh • Power generation 48,310,154MWh

Group companies and invested companies

KEPCO Engineering & Construction Company Inc. Ownership 65.77%	<ul style="list-style-type: none"> • Address 269, Hyeoksin-ro, Gimcheon-si, Gyeongsangbuk-do • Sales KRW 506,012 million • Total assets KRW 762,166 million • Home page www.kepc0-enc.com 	As an engineering company related to power generators and plants, KEPCO E&C has been engaging in the design of nuclear, hydroelectric, and thermal power plants, O&M for generation facilities, plant construction business, and PM/CM business since its founding in 1975.
KEPCO KPS Ownership 51.00%	<ul style="list-style-type: none"> • Address 211, Munhwa-ro, Naju-si, Jeollanam-do • Sales KRW 1,214,304 million • Total assets KRW 1,195,086 million • Home page www.kps.co.kr 	KEPCO KPS is a world-leading comprehensive plant service company and provides high-quality maintenance services for power plants (nuclear, thermal, and hydroelectric), trans- mission and substations, and industrial facilities.
KEPCO NF Ownership 96.36%	<ul style="list-style-type: none"> • Address 242, Daedeok-daero 989beon-gil, Yuseong-gu, Daejeon • Sales KRW 309,911 million • Total assets KRW 792,187 million • Home page www.knfc.co.kr 	KEPCO NF is the only nuclear fuel design and manufacturing company in Korea that was established to localize nuclear fuel and achieve technological self-reliance.
KEPCO KDN Co., Ltd. Ownership 100.00%	<ul style="list-style-type: none"> • Address 661, Bitgaram-ro, Naju-si, Jeollanam-do • Sales KRW 588,160 million • Total assets KRW 524,520 million • Home page www.kdn.com 	Since its establishment as a company in charge of KEPCO's IT, KEPCO KDN has been offering total IT services in all areas of the electric power system, and is growing into a global electric power IT company.

Memberships and Awards

Memberships of Associations and International Organizations

Academic Societies/Associations	Purpose	Year
Korean Institute of Electrical Engineers	Promotion and development of academics and technology related to electrical engineering.	1961
Korea Standard Association	Exchange of information on various technological standards, including industrial standardization and quality management.	1964
Korea Electric Association	Promotion and development of the overall electric industry.	1965
Korea Atomic Industrial Forum	Exchange of nuclear power technology information and cooperation.	1975
International Construction Association	Raising competitiveness by collecting and analyzing information on overseas construction information.	1976
Korea Management Association	Innovating management and providing consulting support.	1981
Korean Society of Public Enterprises	Set policy directions for research activities of public corporations.	1987
Korea Industrial Technology Association	Share information on technology and environment.	1995
Korean Society for Quality Management	Exchange of information among quality management organizations to improve quality management activities.	1995
Korean Institute of Electrical and Electronic Material Engineers	Between industry and academia in relation to electrical and electronic material engineering.	1996
Korea New & Renewable Energy	Promotion of the renewable energy industry and information sharing.	2004
Korea Project Management Association	Apply advanced domestic and international PM techniques and share information with relevant organizations.	2004
Korea Plant Industries Association	Exchange of information to raise the competitiveness of the plant industry and promote exports.	2006
Korea Energy Foundation	Improve energy welfare systems for vulnerable populations.	2006
Korea Development Economics Association	Network with experts for the development of power industry policies.	2008
Korean Association for Industrial Technology Security	Developing policies and engaging in cooperation for the protection of industrial technology.	2009
Korea Smart Grid Association	Smart grid information sharing and cooperation.	2009
Korea Invention Promotion Association	Exchange of information and raising competitiveness in the intellectual property market.	2009
Power Industry Research Society	Power Industry Research Society.	2011
KCCSA (Korea Carbon Capture and Storage Association)	Distribution and support for CCS technology.	2011
Korea Nuclear Association for International Cooperation	Export of the Korean standard nuclear power plant, analysis of overseas nuclear trends, cooperation and information sharing in the nuclear industry.	2011
Future Energy Forum	Review of current affairs and policies in the energy sector.	2013
Korea Electrical Manufacturers Association	Strengthen cooperation with partners in the power equipment and material industry.	2013
National Assembly Forum of Climate Change	Engage in decision-making process and collect information about climate policy legislation.	2013
Korea Photovoltaic Industry Association	Photovoltaic power market research and collection of new technology information.	2013
Korea Valuation Association	Develop talents for patents.	2013
Korea Wind Energy Association	Collection of information on R&D of wind energy technologies and participation in proposing policies.	2014
Korea Foundation for Environmental Movements	Discuss environmental matters and establish a network for cooperation in the power industry.	2014
Power Law Forum	Support legislation for future-oriented power industry.	2015
Korean Foundation for Quality	Share information about international and domestic standardization.	2016
Korea Electric Engineers Association	Organize training programs and career management for power professionals.	2016
Korea Engineering Asset Management Association	Acquire the latest trends and expertise in quality, environment and green management.	2016
Power Industry Development Research Society	Strengthen competitiveness with a focus on the future.	2016
The Korean Society of Safety	Cooperation in research and exchange of information in safety management.	2017
Fuel Cell Industrial Development Association	Gain insight into the fuel cell industry trend and strengthen cooperation and exchange of ideas.	2017

Memberships and Awards

Memberships of Associations and International Organizations

Academic Societies/Associations	Purpose	Year
Korean Network on Anti-Corruption & Transparency	Share anti-corruption activities and ethical practices and develop mutual cooperation.	2018
Private-Public Anti-Corruption Council	Engage in anti-corruption policies.	2018
WEC (World Energy Council)	Strengthen international cooperation and share expertise and technologies.	1969
AESIEAP (Association of the Electricity Supply Industry of East Asia and Western Pacific)	Promote cooperation between electric power companies and experts of Asia and the Western Pacific	1998
EI (Edison Electric Institute)	Exchange of information and technology in the U.S. market	2004
CIREN (International Conference on Electricity Distribution)	Exchange of information with overseas power corporations and contribute to the technology development in Korea	2006
CIGRE (International Council on Large Electric Systems)	Exchange technological expertise between power system professionals around the world.	2009
WNA (World Nuclear Export Company Group)	Group (WNA) Enhancement of international stature and marketing of nuclear power plants	2011
IFIA (International Federation of Inventors' Associations)	Establish connections and a cooperation system with the International Business Association regarding R&D and new technology	2015
GEIDCO (Global Energy Interconnection Development and Cooperation Organization)	Exchange of information and cooperation on global power systems	2017

Awards Status

Awards	Organization	Date
2016 Korea Energy Efficiency Award Presidential Medal	Ministry of Industry	2016.10
CSV (Creating Shared Value) Porter Award 3 consecutive years - Hall of Fame for the first time	Dong-A Ilbo, The Institute for Industrial Policy Studies	2016.12
2016 Korea Management Award 'Top Social Value Company'	Korea Management Association	2016.12
2016 Top Korean Local Economy Leader	The Seoul Economic Daily	2016.12
The 29th Korea Labor-Management Cooperation Award (first time for first-tier public corporation)	Korea Employers Federation	2017. 2
BCM (Business Continuity Management) ISO22031 International Certification	International Organization for Standardization	2017. 3
IJ Global Award 2016 MENA Deal of the Year in Renewable and Conversion Categories	IJ Global	2017. 3
2017 Corporate Management Award	Korean Corporation Management Association	2017. 4
Asia-Oceania Index Award Platinum	U.S. EEI (The Edison Electric Institute)	2017. 4
2017 INPEX (Invention and New Product Exposition) Award	INPEX	2017. 6
CIO 100 Awards (Technological Innovation Category, 2 consecutive years)	U.S. IDG	2017. 8
UK CDP Carbon Management Energy & Utility Sector Honors	UK CDP Worldwide	2017.10
2017 International Convention on Quality Control Circles Gold Award (4 consecutive years)	ICQCC	2017. 11
The 43 rd National Quality Management Competition Public Sector Presidential Medal	Ministry of Trade, Industry and Energy	2017. 11
2017 Top 100 Great Places to Work Public Sector 'Trust Management Award'	GPTW Institute	2017. 11
The 12 th Customer Satisfaction Management Award Public Sector	The Korea Economic Daily	2018. 1
The 31 st CIO 100 Awards (3 consecutive years)	US IDG	2018. 5
2018 Malaysia International Invention Exhibition Winning 2 Categories including Gold Award	ITEX	2018. 5

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